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ABSTRACT

Designed primarily as a guide for teachers at the secondary level and in adult basic education, the book summarizes basic techniques for instructing students in how to read, emphasizing continuous informal diagnosis and adaptive teaching. Chapter titles include: Stages of Development, providing an overview of the basics of the reading process and how one moves from nonreader to reader status; Diagnosis, discussing proven techniques and instruments used to assess reading levels; Teaching Procedures--Stage 1, discussing teaching methods for each stage of the reading process; Stage 2--Reading to Learn, exploring a variety of ways students learn through their reading; Specialized Reading Skills, discussing reading experiences drawn from current study or related work materials through the systematic teaching of work study skills; and, Classroom Management, emphasizing individualized reading and instruction. A bibliography of 52 titles is presented and specimen copies of informal measures for assessing basic reading skills, including the Fry Readability Formula, and a reference list of instructional materials are appended. It is stated that teaching the untaught demands an ability to transform components of the developmental reading program into instructional methods and materials appropriate for learners of all ages and in a variety of situations. (LH)

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Teaching Reading to the Untaught

Michael P. O'Donnell

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TEACHING READING TO THE UNTAUGHT

Second Edition

TEACHING READING TO THE UNTAUGHT

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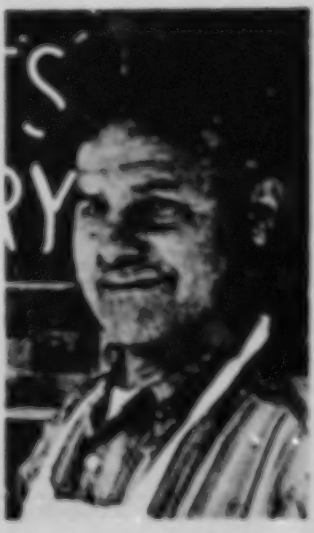
PREFACE

The second edition of this book follows the format of the first. The discussions and activities have been broadened to include the untaught at all levels, including elementary school pupils, junior and senior high school students, and adults in basic education classes. The book was written to provide teachers with a concise, non-technical overview of the tasks involved in teaching reading. The emphasis is on continuous informal diagnosis and adaptive teaching. Teaching the untaught requires the capability to transform the components of the developmental reading program into instructional methods and methods and materials appropriate for learners of all ages.

The trend to label and classify pupils with reading disabilities as "perceptually handicapped" or "learning disabled" has very little utility for the teacher attempting to provide diagnostic and corrective instruction. Recent research and numerous professional articles have underscored the limitations of using exotic tests dealing with perceptual deficits, psychomotor development and psycholinguistic abilities as a means of prescribing for the untaught.[1, 20] The primary goal is to evolve a corrective reading program based upon an individualized diagnosis of specific reading skills.

The work leading to this book was carried out in several community-based "Right-to-Read" sites, long-term staff development projects and the Reading Clinic at the University of Maine at Portland-Gorham. These experiences provided the basis for refining diagnostic and prescriptive techniques, generating instructional materials and identifying the inservice concerns of teachers of the untaught. Diagnostic and corrective procedures were used with thousands of adult illiterates, junior and senior high school students and elementary school pupils.

The writer is particularly indebted to his co-workers and associates for contributing their experiences and research on reading instruction and reading disability. Several significant revisions were possible as a consequence of the assistance of the following: Laurel B. Cyr, lecturer; Charles Smith, associate professor; Leslie Anderson, Lewiston project coordinator; Jane E. Golding, learning disabilities specialist, Westbrook; Gaille Heseltine, "Right-to-Read" coordinator, Biddeford; and David A. J. Bradley, graduate assistant. Special thanks to Marjorie Knight, reading consultant in the Portland Schools for her work in writing the chapter on individualized reading.



FOREWORD

Dr. O'Donnell proposes in *Teaching Reading to the Untaught* to offer teachers a systematic approach for teaching those members of our population who have failed in the regular school systems. No book on reading could possibly have all the answers, but this book certainly has enough answers to help teachers build a better reading program for those students who have not profited by regular instruction.

Dr. O'Donnell presents the Informal Inventory as a means of establishing the instructional level of students. He gives in detail an approach for helping students become independent readers by presenting word attack skills and comprehension skills in a very comprehensive manner. If an educator feels he has heard all this before, he should give a second look to the fresh approach developed by Dr. O'Donnell.

It is my hope that through his efforts and those of other dedicated persons in the Right to Read effort, all people will be afforded their birthright—The Right to Read.

Mollie Reynolds
Director of Curriculum Services
Maine State Department of Education

I. Introduction

Teaching Reading to the Untaught is designed primarily as a guide for teachers working at the secondary level and in adult basic education classes. Its first aim is to delineate and specify the reading competencies necessary for a pupil to progress successfully along the continuum to literacy. If you have not yet attempted to teach the basic skills of reading and writing, you may be surprised at the difficulty that many students encounter as they begin the first steps toward decoding, accurate recognition, and subsequent encoding of our language. You find no difficulty in composing letters, filling in applications, or just signing your name. However, for some 11 million Americans, who are now classified as functional or total illiterates, these simple tasks are major obstacles which cause them a great deal of difficulty throughout their lives.

The guide is a summary of basic techniques for teaching students to read. It is not inclusive, nor should it represent the entire instructional program for the untaught. In subsequent sections you will be urged to consult additional sources for the application of basic skills and for guidance in developing teaching procedures. Of particular importance when working with disabled readers is the relating of the curriculum to the individual needs, interests, and experiences of the students. Whether we are dealing with basic readiness factors or word recognition skills, the pupil's own experiences are more relevant and important than are most available books and materials. Remember, nothing is more essential to continued attendance and sustained motivation than helping the pupils realize a need for what they are learning—and being successful in that undertaking.

Subsequent chapters are divided into several sections. First, we will deal with an overview of the basic constituents of the reading process—how one moves from a nonreader to a reader status. Next, we will examine proven diagnostic techniques and instruments that can be employed to assess the reading operational levels. After we have examined methods for obtaining data relating to specific strengths and weaknesses, we will consider the teaching requirements for each stage of reading progress. Instructional strategies that assure a smooth, rapid and successful progression through each

phase of reading development will be discussed. The methods and materials presented in the text can be adapted for students of all ages. The Appendix contains speciman copies of informal measures for assessing basic reading.

As you progress through the text, you will note that a deliberate attempt has been made to focus only on the most essential features of reading instruction. Each stage of reading progress is explained in terms of abilities. This discussion is presented to explain pertinent details necessary for understanding and diagnosing specific reading problems. Recommendations and activities for teaching reading skills follow the analysis of each major task.

II. Stages of Development

A discussion of the reading process is often omitted in professional books dealing with the teaching of reading. An appreciation of the reading process is more than an academic exercise; it provides the basis for selecting materials and planning the goals of instruction. The process of reading, like a kaleidoscope, changes its nature and focus from one developmental stage to another. At one level the student is mastering perceptual tasks, acquiring a sight vocabulary, and developing facility with basic decoding skills; later, the process shifts to applications of reading in the world of work, requiring comprehension and vocabulary development. Without a precise perspective of the reading process, it is almost impossible to plan a performance-based reading program for pupils. Therefore, an examination of the two stages of reading development is our first objective.

Stage 1. Learning to Read [1]

A. *Prerequisites for Reading*

Most reading experts agree that a major cause of reading failure is a lack of preparation for reading. Reading readiness can be defined as "a state of activity that, when reached, allows a person to read without difficulty." A precise identification of all the attributes that contribute to success in learning to read is not possible. Research and experience indicate, however, that students must develop certain minimum levels of proficiency in several areas, including concept attainment (the ability to classify ideas), language facility (verbal output), auditory and visual discrimination, letter knowledge, and directional awareness.

Most older nonreaders by virtue of their age and experience have acquired a sufficient repertoire of concepts and the language facility necessary for initial reading experiences. Even the most culturally different students have a language system that can be drawn upon to teach reading. Obviously, if a pupil cannot speak English, the goal at this stage would be a program in English as a second language (ESL).

B. *Initial Reading*

The transition from readiness to initial reading usually occurs when the student acquires a sight vocabulary of between 15 and 50

words. Language episodes dictated by the student himself provide the vehicle for developing a sight vocabulary and for practice with auditory and visual discrimination skills. Word analysis (phonics and word structure) begins with words that are known to the student. Most older students have a good sense of phonology. Our goal is to help them utilize a variety of techniques to decode words that are unknown to them in their printed form. The objective at this stage is to build a repertoire of semi-automatic techniques for unlocking words that will make the ability to read a tool to be used, rather than an objective in itself.

C. *Rapid Development of Reading Skills*

Rapid development of reading skills occurs when the basic techniques of decoding have been mastered. At this point, we begin to emphasize the extension of a sight vocabulary, improvement of reading comprehension, building independent word attack skills including phonic and structural analysis, the use of context, and the development of an interest in wide reading.

A significant feature at this level of reading progress is the emphasis on independent reading. Students now have a reasonably large sight vocabulary and some facility in applying the decoding skills (phonics and word structure). The adage that "students learn to read by reading" cannot be overstated. More than half of your instructional program should be devoted to directed and independent reading. You will need a wealth of supplementary reading material to accommodate wide variations in reading achievement and interests.

Stage II. Reading to Learn

A. *Wide Reading*

At this stage, the reading sequence makes a shift from "learning to read" to "reading to learn." Instructional goals continue to emphasize expansion of meaning vocabulary (especially areas associated with content fields), refining comprehension, and reviewing word attack skills. At this level, students are often confronted with words (concepts) that are not in their listening and speaking vocabularies. Decoding skills have much less utility at this stage. Silent reading receives much more class time than oral reading, and speed of silent reading begins to increase without a great deal of formal practice. A large amount of independent reading is in order for pleasure and information. Because of the increased emphasis on independent reading and the demand for reading content subjects,

this level leaves less time for actual reading instruction. Individualized, personalized, or multilevel methods of reading instruction assume major importance.

Many students begin to manifest difficulty in this stage because of their inability to utilize basic work-study skills. We frequently assume in the content areas that students already have the requisite skills to deal successfully with a particular subject. Much directed practice must be provided in outlining, summarizing, note-taking, and obtaining information in a functional and meaningful way.

B. *Refinement of Reading*

The characteristics of this phase include: (1) improvement of the rate of comprehension and flexibility; (2) refinement of the comprehension skills (practice with different types of questions); (3) broadening of the understanding of vocabulary, including context clues, prefixes, suffixes, roots, and multiple meanings; (4) study skills; and (5) improvement of interests and tastes in reading.

Summary

An analysis of the stages of reading development enables us to observe some of the behaviors involved in the growth of reading competency. At the first stage, the reader employs varied skills to make the transition from speech to print. As the sight vocabulary expands, new meanings are derived through the manipulation of concepts (experiences) already in the reader's possession. The reading process then involves both the acquisition of meanings intended by the writer and the reader's own contribution in the form of interpretation, evaluation, and reflection. To help older students to attain this goal, we must be cognizant of the reading process so that diagnostic and adaptive teaching is possible at all stages. The following major components of the stages of reading progress constitute the steps involved in a program for teaching reading to the untaught.

Stages of Reading Progress

I. Learning to Read (0-3)*

A. Prerequisites for Reading
1. Concept attainment
2. Oral language facility
3. Auditory discrimination
4. Visual discrimination: letters, word forms
5. Directional Awareness

B. Initial Reading (0-2)*
   1. Sight vocabulary
   2. Meaning clues (context)
   3. Phonics
   4. Structural analysis

C. Rapid Development of Reading Skills (2-3)*
   1. Application and refinement of initial reading skills
   2. Increased sight vocabulary
   3. Improvement of comprehension
   4. Independent reading

II. Reading to Learn (4-8)*

A. Wide Reading
   1. Vocabulary development
      a. Experience
      b. Word study
      c. Wide reading
   2. Independent reading
   3. Comprehension practice
   4. Study skills
   5. Reading skills in the content areas

B. Refinement of Reading (secondary and post-secondary)

*These designations are not in reference to grade levels, but rather to reading instructional levels, which are discussed in the following chapter.

III. Diagnosis

Working with the untaught requires flexible differentiated instruction. The criterion of excellence is based upon the degree to which individual needs are assessed and met. This process begins by finding the student's "reading operational level." This level is defined by ascertaining the readability of materials which the student is able to handle competently.

The term "readability" refers to the comprehensibility of a publication—how easy it is to read and understand. Generally speaking, indices of readability are established by following basic steps. First, a number of style factors, such as average sentence length, number of syllables per word, and number of words occurring with low frequencies in general English usage, are identified. Second, the number of occurrences of such factors in selected reading passages is correlated with performance in comprehension tests based on the passages. An easy formula to use in establishing readability is the Edward Fry Graph,[18] which is reproduced in Appendix A.

The following are estimates of the readability of typical adult publications:

1. Replies to letters, "Dear Abby"
   Number of sentences: 3.9
   Number of syllables: 126
   Readability: 8.0

2. *Newsweek*, typical article
   Number of sentences: 3.5
   Number of syllables: 146
   Readability: 10.5

3. *Sports Afield*
   Number of sentences: 10
   Number of syllables: 136
   Readability: 5.1

4. *Reader's Digest*
   Number of sentences: 6.3
   Number of syllables: 141
   Readability: 7.7

An important point to observe is that the readability *within a publication* may vary. This is especially true of newspapers and magazines. Readability also ignores concept density and the reader's interest. It is not uncommon for pupils to read very difficult materials in quest of information. Conversely, easy materials may include many ideas and concepts that transcend the reader's experience.

The informal reading inventory is a useful test which provides an estimate of the student's reading level and his facility in applying word attack skills. Although various methods for administering an informal reading inventory are used, the test generally consists of two parts, a word recognition test in isolation, and a series of graded paragraphs beginning at the initial stage of reading and increasing in difficulty up to the pre-GED level. Two short reading selections are administered at each reading level for both oral and silent reading analysis. Varied questions for checking comprehension are constructed for each paragraph to assess different cognitive levels (literal, interpretive, applied, and vocabulary). An advanced informal reading inventory suitable for upper elementary, secondary, and adult students is included in Appendix B.

The first part of the pupil's informal reading inventory consists of a word recognition test. This test enables the teacher to determine the adequacy of the student's sight vocabulary (words recognized instantly without analysis) and his ability to work out the pronunciation of words (application of phonics and structural analysis skills).

When administering the informal reading inventory, it is best to begin with the word recognition test, instructing the student to read the words. In the sample test in Appendix B, twenty words are listed at each reader-level, followed by "flash" and "untimed" columns. The words are presented to the student, one at a time, on 3"x5" cards. The teacher records responses in the examiner's manual for subsequent analysis.

FIFTH READER LEVEL

Stimulus	*Flash*	*Untimed*
1. accomplish	+	
2. barrel	bar	+
3. butternut	+	
4. committee	commit	commit
5. cylinder		+

If the student knows the word without having to resort to analysis, the "flash" column should be checked. When a mistake is recorded, during the initial perception of the word, the error should be written in the "flash" column and the student should be asked if he would like to attempt the word again. Should the student succeed in providing the correct word, a (+) should be placed in the "untimed" column, since this is not a sight analysis. If the student takes more than a few seconds to respond to the stimulus, but is correct, a (+) should be placed in the "untimed" column. After six (6) successive mistakes have been recorded in the "untimed" column, the word recognition test should be stopped. The second part of the test should then be initiated, beginning with the graded paragraphs one level below that of the word recognition test where six (6) errors were observed in the flash column.

The student should be asked to read each paragraph aloud, and a record should be made of the errors that are manifest at each level. This recording is usually done on a sheet which is a copy of the material the student is reading.

The following key may be used to record oral reading errors:

(man)	asks for word
b	
^d	insertion or addition
✗	omission
✗	ignores punctuation
land *sand*	wrong but corrected
saw *was*	substitution
jet	repetition
/	/ / / make one stroke for each one-second pause (give help after 5 seconds)

In addition to a profile of each student's weaknesses, we can derive a reading instructional level from the informal reading inventory. This is the level at which you will *instruct* your students, using materials and resources that correspond approximately to this readability. The level at which the student can read without your guidance is called his *independent* level, and is usually one reading

level below the instructional level. Unless the data are derived initially, you will have difficulty grouping and providing effective corrective measures. You should be thoroughly familiar with the following criteria for establishing reading levels:

A. *Independent Reading Level*—This is the highest level at which a person can read without assistance. The student will meet the following criteria at this level:

1. Word recognition in isolation—90%-100% in the "flash" column.
2. Word recognition in context—99%.
3. Comprehension—90% or better.
4. Freedom from finger-pointing, sub-vocalization and or lip movement.
5. Oral reading rhythmical in a conversational tone with punctuation interpreted correctly.

B. *Instructional Reading Level*—This is the reading level at which an individual should be instructed. This level is characterized by the following behavior:

1. Word recognition in isolation—75% to 89% in the "flash" column.
2. Word recognition in context—95%.
3. Comprehension—a minimum score of 75%.
4. Freedom from body movements, sub-vocalization, finger pointing and lip movement.
5. Silent reading is characterized by the ability to use sight word techniques for recognition of the "new" words.

C. *Frustration Level*—This is the reading level at which a student with reasonable word recognition cannot cope with printed material. It is indicated by:

1. Word recognition in isolation—a minimum of 50% in the "flash" column.
2. Word recognition in context—90%.
3. Comprehension—50% or less.
4. Evidence of finger pointing.

D. *Hearing Capacity Level or Potential*—This is the reading level at which a pupil can understand material which is read to him. This is an index of potential or ability. After the student has reached his frustration level, read the remaining paragraphs to him, asking the comprehension questions for each selection. The following criteria are used for establishing potential or capacity level:

1. Comprehension—75% or better.
2. Language structure in oral discussion is as complex as that in the selection.
3. Ability to supply information from experience pertinent to the topic.
4. Precise and meaningful use of words.

Interpreting Errors

In order to establish a pattern of errors or reading difficulties, we must isolate and classify the word recognition problems noted during oral reading and responses to words presented in isolation. A simple procedure for comparing errors in isolation and context is as follows.*

Phonic analysis	*Structural analysis*	*Configuration*
"tin" for "thin"	"dart" for "darts"	"letter" for "latter"
"men" for "man"	"go" for "going"	"mail" for "mall"
"met" for "meet"	"punished" for "punishment"	"move" for "movie"
"black" for "back"	"photograph" for "phonograph"	

Remember that oral reading performance is not an infallible indicator of reading competency. Good readers will often make several word recognition errors when reading at sight without preparation. Therefore, it is important to consider total performance—using both oral and silent missions.

There are several other dimensions of word recognition performance that you should evaluate:

A. *Addition of Words* usually means that the reader is attempting to embellish the author's ideas ("modern apartments" being read as "large and modern apartments") and is usually observed among readers progressing satisfactorily at about Stage II of reading progress. This usually reflects a high degree of verbal facility and is characteristic of rich associative thinking. Some readers may be overly dependent upon context, and in some instances this may result in distorted meanings. You should also be alert for additions

*Note that several of these errors could be placed in one or more categories. Diagnosis is continuous and should be used to determine consistent patterns of difficulty. Once you have made several hunches, use other tests or observations to verify your initial hypotheses.

which may reveal a problem in making an accurate visual analysis of words (bend, bends; help, helped).

B. *Omission of Words* may be a result of excessive speed or nervousness. Again, we are seeking to determine a pattern. If a pupil omits specific word segments such as endings ("breath" for "breathe," "teem" for "teeming"), we might infer some difficulty with structural analysis.

C. *Repetitions* may reveal a problem with consistent left-to-right directional attack, but more likely are indicative of a stall tactic. For example, while visually processing or mentally attacking a difficult word, the reader repeats the preceding word or phrase, once or several times, and thus gains time to analyze the unknown word. Another explanation for repetitions is the tension or nervousness of the pupil who is insecure in a threatening situation.

D. *Substitutions* of whole words, which normally constitute only a small portion of word recognition errors, usually take four forms: (1) The substituted word has the same idea, as "car" for "automobile," or "jet" for "airplane." This type usually implies that the reader is attending to context, and it is frequently observed among readers who make meaningful additions. (2) The substitution is a whole word, same form (configuration), different idea, such as "letter" for "latter," or "dimmer" for "dinner." This may indicate overdependence on the total word form as the principal means of word identification. It frequently occurs among beginning readers, particularly with words of similar configuration (then, them; work, word, etc.). (3) The substitution is a whole word, different form, different idea, such as "east" for "there," and suggests little attention to word form, visual analysis, or any other method of word attack. Students who make a disproportionate number of these types of substitutions usually have considerable difficulty applying basic word recognition techniques. (4) A partial substitution error involving a letter or sound may reveal problems with the pupil's ability to utilize phonics and other word recognition skills. As was noted earlier, we, as diagnosticians, are attempting to observe a pattern of concentration of errors in one area which may reveal specific difficulties with phonics or structural analysis. Partial substitutions are frequently observed with compound words that have similar configurations, such as "photograph" for "phonograph." This error can be corrected by calling attention to word structure and context.

E. *Reversals* may indicate a lack of adequate directional attack (left-to-right), especially among older nonreaders. Letters with

similar configuration are often confused, such as *b* and *d*, or *p* and *g*, and usually suggest a lack of letter knowledge. If reversals occur with letter sequences, they imply haste or carelessness in some instances, such as *was* for *saw*, or *on* for *no*. A simple but effective procedure for directionality training is to have students circle or underline confused letters or words in paragraphs (visual tracking).

Reversals are common in beginning stages of reading and seldom are observed among pupils beyond the first stage of reading. They will usually spontaneously disappear as students increase their sight vocabulary.

F. *Inability to Decode Words* implies dependence of the reader because of a lack of independent word attack ability. These words should be carefully analyzed to uncover specific patterns (phonic variants, structural elements, etc.) which may be giving the pupil special difficulty.

G. *Other Dimensions of Reading Analysis*

1. *Oral and silent reading*. Norms for speed of reading at different reader-levels (oral and silent) make it particularly difficult to specify average rates of comprehension, since they are usually based on reading a specific kind of material for an established purpose. Oral reading above Stage I generally ranges between 120-135 words per minute; silent reading is usually accomplished at a relatively inflexible rate of about 300 words per minute. In assessing silent reading proficiency, the kind of material and the reading purpose must be considered as these factors will have an influence on reading rate.

2. *Word attack in isolation and with connected discourse*. A comparison of word recognition attack with isolated words and with the same words in paragraphs enables us to speculate on the degree of utilization of contextual aids. If a significant disparity is noted, a high degree of facility with context clues or the converse may be assumed.

3. *Flash and untimed word recognition in isolation*. An examination of student performance with timed and untimed words will reveal the student's sight vocabulary level (words recognized without analysis) and his analysis ability. For example, one 22 year old female illiterate tested by the author had a sight vocabulary at the second reader level; however, she was able to analyze (decode) words to the fifth reader level. Her problem was a lack of simple reading practice with a variety of material.

If the student has no real word analysis problems at the fifth and sixth reader levels, has a fair vocabulary, and good comprehension, he does not need training in word recognition. However, he may need guidance in interpretation and critical reading skills as well as study skills. Some students can pronounce words well, but their comprehension and interpretation may be poor. This means that they need help in word meanings and study skills to develop an understanding of what they read. Some specific techniques for promoting comprehension are discussed in a subsequent section.

At the second stage of reading progress, *Reading to Learn*, it is always a good practice to administer a standardized achievement test to obtain additional data relating to language skills, word study skills, arithmetic concepts, science and social studies, and study skills.[22] If you use an achievement test, always analyze the subtest results. Although limited sampling may influence the validity, widely varying profile scores may suggest a pattern of special difficulties. When using a standardized test on an individual basis, we are really not interested in grade-level scores, but rather data that may isolate and suggest specific areas of difficulty. For instance, one high school student was referred to a reading clinic because of an academic problem. A simple analysis of standardized achievement test data revealed a problem with certain grammatical conventions. After a brief but intensive tutorial program, the student attained a significant improvement in his grades. A comparison of the social studies subtests may also indicate trouble utilizing special study aids (maps, graphs, etc.).

Subtests of various standardized reading diagnostic tests can be used to augment the informal diagnosis. The student's performance should be evaluated on the basis of specific skill needs. Several analytical reading standardized tests can be used selectively with older students. The *Silent Reading Diagnostic Tests* (Lyons and Carnahan) yield a profile of eleven subtest scores and can be used by the teacher without extensive clinical training. The *Durrell Analysis of Reading Difficulty* (Harcourt) is designed for use with pupils at the nonreading through sixth grade reading ability level and can be used with severely disabled readers at the junior high school level and above. The Spache *Diagnostic Reading Scales* (California Test Bureau), similar to the Durrell, includes three word recognition lists, 22 reading passages of graduated difficulty and six supplementary phonics tests. The bibliography contains additional sources.

The Nonreader

If you discover that the student is unable to read words and paragraphs at the initial-reader level, then you must determine to what extent he has acquired the prerequisites for reading—the perceptual skills outlined in the first stage of reading progress. These include concept and oral language facility, auditory and visual discrimination, letter knowledge, and directionality.

A. *Concept and Language Facility*. Before a person can be a successful reader there must be a reasonable congruence or relationship between his oral language facility and the material he is expected to read. Most children and adults, while they may not be able to decode and encode printed symbols, have tremendous language experience.

Reading problems among undereducated adults are not usually caused by the lack of a viable language system. Rather, many reading programs have not provided for linguistic differences. Oral language has tremendously wider use than written language and is subject to many small group variations. Unfortunately, many educators view language deviation in terms of their own middle class standards.

An informal scale can be used to assess concept and language communication skills. Monroe's excellent discussion of language development in *Foundations for Reading*[36] provides a good background for constructing such a scale. Observations against this scale can then be made by providing opportunities for the pupil to use his language, such as free responses to visuals, relating back a listening exercise, or describing some special or significant occurrence. Factors such as the following should be observed: (a) concreteness or abstractness of ideas (making inferences, cause-effect, and seeing events and objects in relation to each other); (b) ability to verbalize words by meanings, including classification of ideas; (c) verbal facility, including an accurate description of an event; and (d) use of standard English.

B. *Auditory and Visual Discrimination* are extremely important skills in initial reading. Both of these abilities must be developed simultaneously if students are to attack words successfully. Several researchers have postulated a hierarchy in the development of these skills. One such study suggested the following sequence: (1) auditory discrimination; (2) auditory memory; (3) auditory integration; and (4) auditory-visual integration.[46] Many teachers assume that because of their age and experience, most pupils have attained a high level of auditory and visual discrimination despite their

reading handicaps. We have observed many cases of auditory and visual discrimination problems among adult nonreaders. They can hear and see (acuity). Their difficulty, then, involves cognitive or mental discrimination among symbols and phonemes.

The informal test of auditory visual integration in Appendix B can be used to assess the pupil's ability to discern differences in beginning and ending sounds. Dykstra demonstrated that the ability to discriminate among beginning sounds in words was the best predictor of reading achievement among all the auditory discrimination tasks studied.[15] The test consists of a stimulus word presented auditorily. The student is asked to identify, usually from a list of 3 words, one having the same beginning or ending sound as the stimulus word. We are assuming that the student's case history reveals no hearing loss. High tone deafness (inability to distinguish speech sounds such as f, v, s, z, sh, zh, th, t, d, b, p, k, and g) will greatly impair success in phonics instruction.

Informal letter and word form visual tests can be used to test visual discrimination ability. The student is instructed to examine three pairs of words and indicate which word pairs are the same (word so—so word—house house). Several informal variations of this test are possible. The student can be asked to match and name letters. The results will be indicative of letter knowledge as well as visual discrimination.

Again, many pupils have attained an adequate level of visual perception. Tests of visual perception should be done with letters and word forms. Nonword form tests, such as geometric shapes, are of little value in accurately assessing this ability. Appendix B contains a specimen copy of a visual discrimination test using word forms.

Research has revealed that many older beginning readers have difficulty integrating auditory and visual clues in beginning reading. For example, one study conducted at the Mott Adult Education Center suggested that many beginning readers needed practice in visual-auditory integration, such as seeing a stimulus word and determining which one of three words presented orally was the same as the visual stimulus.[16] You can devise informal measures to assess the student's mastery of sensory integration, including such word lists. You can also provide practice using contextual reading materials by asking the student to find a word (visual) in a given selection that is the same as the stimulus word (auditory) dictated by you.

C. *Visual Memory* is the ability to retain or hold a visual image of a stimulus. This skill is obviously closely related to spelling and should be included in the instructional program. You can devise

simple measures to test visual memory, such as flashing a card with a word or image and directing the students to find the same stimulus on a corresponding page. Multisyllabic words are used at Stage II for visual memory training.

D. *Letter Knowledge* is a significant predicator of ability to profit from reading instruction, not because letters can be easily identified and taught, but rather because letter knowledge indicates the pupil's breadth and depth of exposure to verbal artifacts in his environment.

E. *Directionality* in reading refers to the ability to follow a line or point from left to right and is fundamental to successful reading. Most older students have attained a stable concept of "left" and "right." Our task with older nonreaders is to stabilize a constant left to right movement and accurate return sweeps in reading. Remember, reversals are common in the initial stages of reading and will usually disappear by Stage II.

Summary

After you have administered the informal tests and made a tentative assessment of reading performance, it is wise to give a standardized test to augment your data.

The test results should be kept in the student's folder along with examples of his work. Keep the folder as complete and accurate as possible so that you will always have at your disposal a complete record of progress, and session by session needs. You should also record what you did in each period: the skills or elements taught, the books and materials used, and the results. This will enable you to look back at any time and see what was the most effective and what was the least successful.

As a reading teacher, you must be able to identify the basic skills (components) which underlie the reading act. If you can not, your first task is to study the sequence presented in subsequent chapters and amplify your understanding by referring to the suggested readings. Next, you must be able to construct and administer measures that will accurately assess the pupil's strengths and weaknesses. Once the data have been attained, you must be able to interpret and categorize errors according to patterns. Remember, diagnosis is continuous and is apparent in every effective teaching situation. Finally, you must be ready to remediate specific areas of located weakness with the precision and effectiveness found in every good reading clinic.

The following diagnostic worksheet is used in the Reading Clinic

at the University of Maine Portland-Gorham.* The data encompasses the entire developmental reading program. Only the sections that are appropriate in terms of the student's particular stage of reading progress are completed. For example, if a student is at the initial reading level, only the first three pages would be relevant. Specific diagnostic and prescriptive techniques are outlined in subsequent chapters.

INFORMAL READING DIAGNOSTIC WORKSHEET

Student Cynthia Age 15 Examiner D. Bradley

Date 7/1 School Elmwood

Parents Mr. & Mrs. D. Address _____

Telephone _____ Referred by _____

M. A. 15-1 I. Q. 103 Test Peabody Picture Vocabulary

I. *PHYSICAL FACTORS* X indicates no problem

A. Motor:
1. Vocalization X
2. Finger pointing X

B. Speech:
1. Lisping X
2. Articulation X
3. Stuttering X
4. Vocabulary X
5. Other no apparent problems

II. *GENERAL READING PERFORMANCE*

A. Reading levels:
1. Potential 7th +
2. Frustration 6th
3. Instructional 5th
4. Basal-independent 4th

B. Word recognition in isolation:
1. Sight vocabulary 5th
2. Word analysis 6th

*Complete diagnostic packets are available at the Bookstore, University of Maine Portland-Gorham, Gorham, Maine 04038. Packets are available for elementary, secondary and adult basic education students.

III. *SPECIFIC READING PERFORMANCE* (Informal Reading Inventory)

A. Additions: (Words, letters, combinations, phrases, etc.)
"the old *angry* man"
"huge *old* house"

B. Omissions: (Words, letters, combinations, etc.)
Several due to excessive speed (the, of, or) made an accurate analysis when called to her attention.

C. Substitutions: (Same meaning, configuration, partial, guesses)
meaningful—"large" for "huge", "Bikes" for "Bicycles"
configuration—"through" for "though", "causes" for "cases"

D. Repetitions: (Words, letters, combinations, phrases, etc.)
None

E. Mispronunciations: (Words, letters, combinations, phrases, etc.)
None

F. Words aided:
None

G. Summary and comment: Good analysis skills, needs many opportunities to apply them with easy reading material.

IV. *WORD RECOGNITION PROBLEMS*

A. Phonic analysis:
1. Visual discrimination X
2. Knowledge of letter names X
3. Auditory discrimination X
4. Knowledge of phonic principles ok
   Application X
5. Phonics skills
   a. consonants: initial X final ___ medial ___
   b. consonant blends: X
   c. consonant digraphs X
   d. short vowels X

e. long vowels X
f. vowel digrapns X
g. "r-controlled" vowels X
h. diphthongs X
i. phonograms X
j. other

6. Comment: Cynthia has good mastery of all basic phonics skills.

B. Structural analysis:
1. Affixes
a. inflected endings X
b. suffixes X
c. roots X
d. prefixes problem with meanings—see vocabulary development
2. Compound words X
3. Contractions X
4. Hyphenated words X

V. *COMPREHENSION*

A. Responses to questions *
1. Level I (literal) difficulty recalling specific details
2. Level II (interpretive)
a. comparative unable to relate details
b. implication could not draw conclusions
c. cause & effect unable to see relationships
d. quantitative difficulty selecting and relating significant facts
3. Level III (utilization) could not function beyond the interpretive level
a. application
b. analysis
c. synthesis
d. evaluation

B. Comment: Cynthia needs considerable practice detecting different patterns of organization and perceiving relationships within material.

VI. *VOCABULARY DEVELOPMENT*

A. Context clues X

*Evaluate organizing and summarizing capabilities under study skills.

B. Structural Elements:
   1. Invariant prefixes problem "ap", "intra", "intro", "non", "syn"
   2. Invariant suffixes X
   3. Combining forms X

C. Figurative language and idioms weak—practice comparing literal phrases and figurative phrases

D. Comment: attentive to context as indicated by use of meaningful additions and contextual substitutions—needs work in analyzing polysyllabic, technical words.

VII. *STUDY SKILLS* *

A. Locating information:

   1. Knowledge of basic reference tools
   2. Selects pertinent information
   3. Ability to use library
   4. Dictionary usage
      a. alphabetization skills
      b. guide words
      c. pronunciation (key) needs help with application
      d. meanings of words
      e. synonmys, antonyms, homonyms

B. Evaluating materials:
   1. Distinguishes between relevant & irrelevant statements Has difficulty deciding between factual and opinion statements
   2. Awareness of author's qualifications Doesn't seem to be aware, accepts what is stated.

C. Organizing and summarizing information:
   1. Detects organization patterns Cannot identify main ideas, particularly with comparison—contrast, cause —effect.
   2. Outlining practice in conjunction with organization
   3. Summarizing Cannot select important ideas, repeats everything

*See O'Donnell-Cyr *Informal Diagnostic Battery of Study Skills*, University of Maine Portland-Gorham, July, 1974.

4. Following directions X
5. Skimming X

D. Retaining what is read ($SQ3_n$):
All responses dealing with directed study of content area materials were negative.

E. Special study aids: can understand, but doesn't utilize in study
1. Graph reading X
2. Map reading . X
3. Political cartoons & illustrations X

F. Content area reading: (Estimate level and indicate which specific skills can be applied in what types of material)

VIII. *GENERAL INFORMATION ON STUDY* •

A. Does he have regular schedule? No

B. Does he complain of inability to concentrate? Yes, Cynthia reads her assignments without establishing purposes and follow-up.

C. Does he depend on rote memory? Too concerned with attempting to recall details.

D. Does he have difficulty writing compositions? (Obtain some writing samples)
Yes

E. Is he a very slow reader? Yes Why? Purposes for reading are not variable.

Recommendations:

Discussion of Test Results

I. *Physical Factors*

Most students with reading problems exhibit few, if any, physical impairments such as hearing or sight loss. High tone deafness will cause difficulty in applying phonics and structural clues. It is always advisable to refer pupils for initial screening. Students at the initial reading stage will move their lips and point to words. These are common symptoms and should be ignored. Cynthia had no apparent physical problems or history of illness.

The observed disparity between Cynthia's scores with words in the sight and analysis columns indicates that she can apply analysis skills to work out auditory associations of words that are not known at sight. A common characteristic of older disabled readers is good analysis ability but an inadequate sight vocabulary. This usually reflects the emphasis given to phonics and structural analysis skills at the expense of many opportunities for sustained silent reading. Beyond the first reader level, pupils literally learn to read by reading.

II. *General Reading Performance*

Cynthia received a score of 75% in the flash column at the 5th reader level and 75% in the untimed (analysis) column at the 6th reader level. Her paragraph comprehension score with the informal reading inventory was approximately 75% of the 6th reader level. Using the criteria for determining reading instructional level, Cynthia is functioning at the high 5th, low 6th reader level. It is always advisable to begin work with disabled readers at their independent point, in this case, the fourth reader level. Her frustration level is one reader level beyond the instructional level. Hearing capacity is established by reading selections to the student which are written above his actual instructional level and asking comprehension questions. Cynthia's potential level (75% comprehension) was high 7th reader.

III. *Specific Reading Performance*

An analysis of Cynthia's word recognition errors on the informal reading inventory reveals that she is attending to context. She made several meaningful substitutions ("large" for "huge"), which is indicative of good verbal facility. She had some problems with words of similar form ("through" for "though"). Helping pupils make an accurate visual analysis of words involves practice in lo-

cating the most useful structural and phonics elements in words as well as developing flexibility in the application of this skill. Specific teaching procedures are discussed in the next chapter.

IV. *Word Recognition Problems*

Students reading above the fourth reader level seldom need guidance in the use of basic phonic and structural analysis skills. The major emphasis is on building a meaningful vocabulary. Cynthia's word recognition error profile confirms this observation.

V. *Comprehension*

Comprehension can be measured by comparing responses to different types of questions (literal, interpretive, utilization and vocabulary). The questions in the informal reading inventory, structured to assess these capabilities, are arranged in the order of difficulty. Comprehension is usually not a formidable problem for students reading below the third reader level since most of the reading selections do not transcend their experiences.

Cynthia has problems with literal and intrepretive type questions. If a student is having difficulty at these levels, we can assume a need for practice with utilization questions. The first objective of the corrective reading program will be guidance in selecting relevant details. Diversified questioning techniques, discussed in a subsequent chapter, contribute significantly to understanding printed materials.

VI. *Vocabulary Development*

Word study is comprised of three instructional goals: (1) using context clues, (2) attaching meaning to structural elements, and (3) dealing effectively with figurative language. Reliable information on word opulence can only be obtained through observation in functional reading situations. These techniques are discussed as part of the reading program for Stage II. Cynthia's performance with the informal reading inventory revealed considerable facility with context clues. Related data indicated that she had problems with structural elements and coping with variable meanings of figurative language.

VII. *Study Skills*

Work-study skills can be assessed by informal tests. The assessment consists of two parts.

First, the student responds to a series of questions concerning his study habits, followed by informal tests which require the student to apply study methods. Cynthia's performance on both measures indicated problems with evaluating materials and organizing information. These sub-skills relate closely to comprehension already identified as causing Cynthia a problem. The teaching tasks for study skills are discussed in detail in Chapter 6.

VIII. *Recommendations*

An effective instruction program can be planned by relating Cynthia's reading operational level to the requirements for the corresponding stage of reading. This involves a thorough inspection of the requirements for Stage II of reading progress. The first step is to specify three or four immediate program goals by using the diagnostic data derived from the informal reading analysis. These would include:

(a) Varied opportunities for sustained independent silent reading.
(b) Practice in dealing with literal and interpretive comprehension requirements.
(c) Word study focusing on structural elements and figurative connotations of words.
(d) Functional application of study skills, stressing organization patterns and critical thinking skills.

Specific techniques for evolving these program goals are discussed in subsequent chapters.

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IV. Teaching Procedures—Stage I

Learning to read implies that the pupil can predict some kind of meaning on the basis of the printed material before him. Older students, who have considerable oral language ability, can best be guided into reading by using material that closely resembles their speaking patterns. Often this material can be dictated by the students, and then re-read. This technique is called "the language experience" approach.

The rationale of the language experience approach simply stated is, "If the student has something to think about, he can talk about it, write about it (in the initial stages the teacher will have to record each episode for him), and he can read about it." [32] The method is based upon the oral language facility of the learner. The number of different morphemes (words) that pupils can use far exceeds those found in beginning reading materials. All the essential pre-reading and beginning reading skills can be taught by using a functional vocabulary of unlimited richness and variety.

Early lessons should provide many opportunities for the adult students to use their language and see the results translated into print. For example, you should start by identifying and talking about things that are of interest to them. A recent study conducted by the Maine State Department of Education revealed that adult basic education students are concerned about fourteen general topics.[35] These interests, listed in order of their importance, can provide the basis for developing language episodes with adults:

1. Living within my means
2. What do I live on when I retire
3. Smart food buying
4. Looking for a job
5. How I can become a better person
6. Understanding insurance
7. Family health
8. My responsibilities as a citizen
9. Population, pollution and conservation
10. The joy of good food

Lee, Davis M. and Allen R. Van, *Learning to Read Through Experience*. N.Y. Appleton-Century-Crofts, 1963.

11. Growing old
12. How to build character in children
13. Spelling better
14. Using better English

Similarly, Stauffer has suggested a number of stimulus topics for younger pupils: [48]

> Every classroom, school building, and playground represents literally diamonds of ideas. If the experiences pupils bring to school with them are added to this, it becomes apparent that acres of "interest" diamonds are available—personal, home, neighborhood and community, school, historical and cultural specialties, current and seasonal events, books and papers, TV and theater, and so on.

Personal language episodes may include likes and dislikes, fears and anxieties, feelings of adequacy and attitudes and biases. Experiences to record about home and family are easy to obtain, including relatives, kinds of homes, pets, and personal happenings.

After some spontaneous conversation has occurred on any given topic, you might record several sentences. Initially, accept the language as it is given by the student. Premature insistence upon "proper usage" can stifle the spontaneous expression of language and may result in language-episodes that do not fully conform to the pupil's natural oral language patterns.* The following are suggestions for writing episodes:

a. Record the episodes in manuscript (print).
b. Use both upper and lower case letters.
c. Try to build the ideas around a central concept or topic.
d. *Always accept* the student's language.
e. Make certain that the student *sees* you record each word.
f. Read each completed phrase or sentence together, moving your hand from left to right.
g. Read the entire chart together, deciding on a title.

The following language-experience episode was dictated by a thirty-nine year old male functioning at the initial stage of reading.

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*A significant cause of reading disability among disadvantaged populations is the incongruence between oral language patterns and instructional materials. Rather than adjusting the pupil to materials, the pupil's own language usage should be the basis for initial reading and writing.

Wildlife Reserve for Birds

Dana has his hatchery—one he built himself. It's a hatchery for any kind of eggs. He sends away for all kinds. He's got pheasants, wild geese, and wild turkeys. He raises them, and the game reserve furnishes the feed for them. They take them to zoos and places where people can go see them. He has to have a license to do this. He is an animal lover. He's got a farm up there.

You can see almost anything you want to up there. He even had a little fawn deer—right in the house. His wife thought the world of it. It followed her right up and down the stairs. She didn't want anyone else to feed it, she thought so much of it. He found it in the back field behind his house. The game wardens came and got it after three months. His wife didn't like that, but his license didn't cover him for wild game, just wild birds.

A forty-four year old bilingual French female dictated these episodes during her first week in the Adult Reading Clinic:

My Daughter

Claudette and Nichol, she's going to trip this afternoon for Massachusetts. She wish make a good trip and big fun. She's go by car with cousin and Nichol, boyfriend. I hope she's no have accident. Maybe she's go back tomorrow not too late.

About My Week

I been working this week only two days. On my days off, I'm doing the spring cleaning at my big house. It's a lot of work, I'm telling you! I been painting the inside of my cupboard and washing the wall of the kitchen. And the woman upstairs, she's always downstairs with her dog checking on me.

An 8th grade boy dictated the following selection:

My Weekends

I went with my father up to his camp, trapping. I caught one rat. It was a common rat, like down here. The camp is in East Livermore. We can drive to it. It's on the outskirts of town. It's a log cabin. It's just one room, partitioned off. It has a spring with a pump, no faucets. And it has electricity. My father rents it, but he's getting a trailer.

After the language episode has been transcribed, the student and the teacher read the dictated experience together. Functional teaching of reading skills follows, including matching unknown let-

ters, calling attention to sounds in the initial and final positions and matching words. The original chart is typed for the student to take home. The next session begins by discussing the language episode and inviting the student to read the selection again silently. Teaching techniques for building a sight vocabulary are discussed as part of the initial reading.

A. *Prereading and Initial Reading*

1. *Concept and language development*—The successful transition from nonreading to reading involves the utilization of a fairly well-integrated language system. Most adult basic education students have attained these prerequisites because of age and experience. If you are instructing pupils who have not achieved at least a moderate mastery of the English language, your first goal must be to provide opportunities for them to use their language in varied informal situations.

2. *Visual discrimination* or perception in reading transcends the mere act of observing a stimulus and involves the ability to distinguish and interpret what is seen. More specifically, we are concerned with providing practice in discriminating among letters and words. If an analysis of errors reveals a problem with specific letters, print these letters on 3"x5" cards and instruct students to underline similar letters in their language episode. Call attention to their form and name. Additional practice and reinforcement of learning can be accomplished through writing activities.

Word matching practice can be done by having students discriminate between words of similar configuration such as *then, than,* and *bet, bit.* Initial exercises with troublesome letters and words should include examples that are of strong dissimilar configuration such as *b: m, b z.* Procedures should be simple and focus on the purpose of the lesson—learning the names and shapes of specified letters in a functional context.

3. *Auditory discrimination* should be incorporated in every teaching activity during the initial stage of reading progress. After the language episode has been recorded, write several known words on the board and call attention to initial, final, and medial sounds. At this level the student must learn to recognize one letter sound as the same sound when he hears it in other words. You might say, "Listen to my name—Mike. I am going to say three more words, and I want you to tell me which word has the same beginning sound as my name: *shirt, money, cab.*" Other activities for auditory discrimination include:

a. Noting similarities and differences in pairs of words such as *Mike* and *might*.
b. Asking students to select objects or pictures that have the same beginning sound as the auditory stimulus.
c. Utilizing context and auditory clues simultaneously, as, "With what do you clean the floor?".
d. Having students supply rhyming words for simple responses, such as *bite* and *sight*.
e. Practice in noting differences in final sounds of words.
f. Training with consonant blends in initial and final positions.

Work with auditory discrimination should continue as part of phonics instruction throughout the initial reading period. Practice should include words from the pupil's vocabulary notebook or experience episodes. Letters should never be separated from the service they render as units in representing sounds in words. Phonetic analysis of isolated letters or elements is decidedly unprofitable and should be avoided.

4. *Auditory-visual discrimination training* is presented early in the student's instructional program. As previously noted, the ability to combine these two modalities is a significant feature in reading progress. Training should include exercises which allow the pupil to hear a word and then make a visual application. The more proficient the nonreader becomes in using auditory-visual clues, the more apt he is to unlock words in dictated experience stories. A number of exercises can be used, including:

a. Naming objects from pictures or illustrations that begin with a specified letter sound.
b. Underlining words in language episodes that correspond to spoken words.
c. Practice with consonant cards.

Auditory-visual training must be integrated with phonics and word structure and continued throughout Stage I.

5. *The acquisition of a sight vocabulary* marks the transition from prereading to initial reading. Sight words are recognized instantaneously without the benefit of analysis, and they provide the basis for introducing other word recognition skills such as phonics and word structure. It is not necessary to use a standard list of high frequency words such as the Dolch List since most of these words will be included in the language episodes dictated by your students.[14]

In one adult basic education class visited by the writer, the teacher had assembled a variety of advertising, occupational and sports re-

lated material for use in conjunction with the beginning reading program. One pupil who had recently dictated an experience episode about his farm, was working independently underlining the word *tractor* in several pages of material from the John Deere Company. Others were underlining words from *Playboy* magazine! Students need many varied exposures to words before they become part of their sight vocabulary.

At the next session with your student, you should begin by inviting him to read the language episode chart silently, asking him to underline all the words he knows. Following this exercise, read the chart together. Using a 3″x5″ window card:

a. Let the student read individual words in context.
b. Move the card around isolating specific words for recall.
c. Write some known words on cards and encourage him to match them with the ones presented in context. Remember, the likelihood of retention is increased when words *remain in context*. Isolated word drill is an extremely limited and ineffective technique for developing a sight vocabulary.

Every student should have a vocabulary notebook in which he records known words (sight words). The notebook should include only words that are recognized 3-4 days after the chart has been written. They should be placed in alphabetical order and will provide at a future time the basis for instruction in phonics and structural analysis. The vocabulary notebook provides an excellent depository from which the reserves are never depleted. *Do not* be concerned about *vocabulary control*—one of the first words that one student learned was *Budweiser*. During the initial stage of reading we are concerned with building a sight vocabulary that will be drawn upon for teaching basic decoding skills. Other activities for building a sight vocabulary include:

a. "Discovery-association"—matching words with those found in books.
b. Matching words with those found in want ads, sports pages, advertisements, fashion magazines, health aids, job applications, etc.
c. Devising special lists of words for which there are no visual images—the, then, and them, etc.
d. Forming statements from the words in the vocabulary notebook.
e. Matching words of similar configuration (them, than; was, saw).

A practice that many adult basic education teachers have found effective is to write sight words on cards and number them according to the language episode from which they were taken. You can encourage your student to refer back to the language experience chart if the word is not recognized in subsequent encounters. The roots of word recognition training must be deeply linked to functional utilization.

The basic initial reading tasks are auditory and visual discrimination training and the acquisition of a sight vocabulary. Facility with these skills provides the foundation for work with meaning clues (context), phonics and word structure. Little progress can be expected in initial reading until students have acquired a sight vocabulary.

We have discussed the major beginning reading skills in isolation to facilitate analysis. In practice, skills are always developed in combination. For example, an unknown word might be attacked by calling attention to its context, such as "Mrs. Jones lived in a brown *house*." The initial letter (visual and auditory discrimination) may also trigger an association for the word. Once your student is able to recognize letters and word forms accurately, discriminate among speech sounds, and has a sight vocabulary of between 25 and 50 words, reading readiness training is virtually over. Other aids must now be introduced to help the student decode words that are not part of his sight vocabulary. These aids include: meaning clues (context), phonics and word structure.

6. *Phonics instruction*, as it relates to reading, is the ability to associate printed letters with the speech sounds that these letters represent. In applying phonic skills to an unknown word the reader blends a series of sounds prescribed by the order in which particular letters occur in a printed word. Obviously, the pronunciation of printed symbols is an effective technique only when the words are in the student's auditory vocabulary. It is important to establish that phonics is one of a number of ways that a pupil can "work out" words unknown to him only in their printed form. As the phonics content is presented, other word recognition aids such as context clues and word structure will be presented simultaneously.

a. *Prerequisites for phonics instruction:*

(1) Adequate speaking and listening vocabulary (oral language facility).

(2) Auditory and visual discrimination training.

(3) A number of words which can be recognized at sight.
(4) Ability to use context clues with at least moderate effectiveness.

The first step in teaching phonics is to appreciate the scope and sequence of the basic skills. Our task is to identify those skills that will enable the students to most effectively attain a high degree of word recognition facility. You will discover tremendous variations in the need and scope of training for beginning readers.

Many adult basic education teachers inquire about the teaching of the nomenclature of phonics such as "vowels," "digraphs," "diphthongs," etc. As your students acquire a sight vocabulary, the function of these elements will be understood inductively. We do not want to burden them with terminology, rather we are concerned with the functional application of the process in reading situations.

b. *Phonic content*

(1) Consonants
b, p, m, w, h, d, t, n, v, hard g (gun), soft g (giraffe), y (yet), f (fin), z (zoo), r (turn, care), j (jump), k (kite), hard c (cute), soft c (city), s (as), s (sat), q (kw=queen, k=bouquet) l (like bull), x (gz=exit, ks=fix, z=anxiety).

(2) Consonant blends
A blend consists of two or more consonant letters that record a sound which is associated with each of the individual letters, such as spl, scr, and str.

(3) Consonant digraphs

A consonant digraph consists of a combination of letters (k=character, sh=chiffon, ch=church), wh (hw=when, wh=whale, silent, whole), which stand for a single sound that is unlike the sound associated with either letter. Some common consonant digraphs are: th (thin, this), sh (should), ch (chair), ng (bring), ph (phone), and gh (cough).

(4) Short vowels
a (am), e (end), i (it), o (odd), u (us), y (happy). When *y* appears somewhere other than the beginning of a syllable, it functions as a vowel and records under various circumstances the long sound and short *i* as well as the long *e* sound. It can also be silent in words such as *tray* and *key*.

(5) Long vowels
a (ace), e (eat), i (ice), o (old), u (use), y (my, cry). In dealing with short and long vowels it is necessary to keep in mind the difference between a *closed* and *open* syllable. A closed syllable is one that ends with a consonant sound and usually records a short sound (up, bend, thrust). An open syllable ends with a vowel sound and usually records a long sound (silo, hi, halo).

(6) Silent letters
Some consonants, when combined with other consonants, do not record a sound. They are called silent. Many of these appear at the beginning of words, such as: *w*r (wrong, *w*rite), kn (*k*nife, *k*now), gn (*g*nat), gh (*gh*ost, *gh*etto), rh (r*h*ythm, r*h*ubarb), and in other positions: b (dum*b*, clim*b*), l (ta*l*k, cou*l*d), t (ca*t*ch, lis*t*en).

(7) Vowel digraphs
A vowel digraph consists of two vowels that record a single sound, usually a long vowel sound: ai (pail), ea (each), ee (bee), oa (boat), oo (moon), ui (fruit).

(8) Vowel diphthongs
Diphthongs consist of vowel pairs that record a sound unlike that of either vowel. Another characteristic of a diphthong is that it makes a sound requiring a change in the mouth position. The following combinations are usually classified as diphthongs: ow (bow), ou (out), oi (noise), oy (boy), ew (few).*

(9) Vowels with R
Where *r* follows a vowel, the vowel sound is recorded as follows: ar (car), er (her), or (word), ir (dirt), ur (turn).

(10) Phonograms
Phonograms are phonic elements or "word families". Common phonograms are: -ail, -air, -all, -ake, -ent, -ight, -ill, -old, -ove. Phonograms are often used in consonant substitution exercises (e.g., might, fight, tight, light, etc.).*

c. Teaching suggestions

(1) Consonants
Phonics instruction should begin by stressing the initial

*It is not necessary for your students to linger on the technical distinction between vowel digraphs and diphthongs. Many of the words containing diphthongs are quickly learned as sight words.

sounds of words. The majority of words in the English language begin with consonants. For example, 175 (approximately 80 percent) of the 220 words on the Dolch Basic Sight List begin with consonants.[14] Work with consonants should be based on words that are within the student's reading vocabulary. After the student hears similarities and differences in the beginning sounds of words, pronounce a number of words which begin like a key word. Ask the student to think of other words that begin with the same initial sound. Ask him to pick out one of the three words you say which begins with the same initial sound. Variations of this technique include calling attention to objects and pictures in the classroom that record a specific sound.

After a few initial consonants have been learned, print them on a "consonant card" for the student. The cards can be used in a variety of ways during the initial stage of reading. You may provide auditory-visual discrimination practice by saying words (auditory) and having the student refer to his card to identify either the initial or final sound (visual). (To extend this activity present a number of words orally and ask the students to underline initial and final letters in newspapers that record the same sound.) Consonant substitution with known phonograms is a good consonant reinforcement activity. For example, using the known word "pain" the student may make other words with "ain" by referring to his consonant chart.

(2) Consonant blends

Attention to consonant* blends should take place only after considerable work with single consonants. Twenty-four two and three letter blends may be divided into three major groups on the basis of a common letter:[23]

(a) Beginning with *s*: sc, st, sk, sw, sl, sm, sn, sp, spl, spr, scr, str.
(b) Ending in *l*: bl, fl, cl, gl, pl.
(c) Ending in *r*: br, fr, tr, cr, gr, dr, pr.

The major objective of instruction with consonant blends is to lead the student to conclude that the two or more

*In consonant substitution exercises, the author is not advocating drill on columns of words for its own sake. However, if your students have learned several words in a family, such as *tail, fail,* and *wail,* calling attention to the same speech sound when they initially meet the word *quail* would be a desirable teaching procedure.

letters combine into a blended sound. In teaching blends, use words from the student's vocabulary notebook and add known blends to his file of consonant cards. In teaching the skill of recognizing and decoding consonant blends, guide the student to:

(a) See the letters involved.
(b) Conclude that in every instance the letters combine into a blended sound.
(c) Learn that it is necessary to discriminate between or among the sounds of individual letters such as *b*ag, *r*ag, *br*ag.

Activities for teaching an awareness of consonant blends should involve words from the student's vocabulary notebook and may include:

(a) Responding to words that have the same blend as a stimulus word: store, stove, stamp, etc.
(b) Underlining words in magazines that have a corresponding consonant blend sound.
(c) Consonant blend-phonogram substitution work may be done with known elements. For example, if the student meets an unknown word like *bl*ack, he may refer back to his vocabulary notebook for *b* words containing similar consonant blends, such as *bland* or *block*. This type of activity provides operational decoding practice.

(3) Consonant digraphs

A digraph is a combination of two letters which when pronounced results in one speech sound.* This sound is neither a blend of the two letters nor the characteristic sound of either. Some of the digraphs are: ch, sh, wh, th, ng, ph. Practice in auditory-visual discrimination can be provided using the pupil's vocabulary notebook as a source of words. For example, the digraphs *wh* and *ch* might be introduced by giving the student the key words "*wh*eel" and "*ch*ange" and having him underline words in a list that contain these elements. The high utility phonics generalizations numbered 3 and 4 provide teaching suggestions which can be used with consonant digraphs (see pp. 39-40).

*Stressing the distinction between blends and digraphs is of little importance to students. Whether they can correctly label one combination of letters as a blend and the other as a digraph has no bearing on learning to read. The difference is important for the teacher, however, in that it leads to a more precise diagnosis.

(4) Letter substitution (word families)

Giving students an opportunity to produce other words using their consonant and blend charts offers practice in visual and auditory synthesis. Again it is important to use known words from the student's notebook in developing substitution activities. When students show some proficiency with initial consonant substitution, switch to the ends of words (can=cam, cap=cat). Do not hesitate to use blends and digraphs as they fit a situation. Be sure that you give the students an opportunity to use the words they make—either in oral or in written context.

(5) Vowels

By the time students progress to the vowel stage they will have had much experience with words, consonants, blends, and digraphs. A major understanding about vowels is their variability, that is, one vowel represents several different sounds. For example, *a* has a different sound in each of the following words: ran, rain, yard and saw. Multiple spellings of the same sound are seen in the *ou* of *house* and the *ow* of *down*; the *oa* of *boat*, the *ow* in *know*, and the *o* in *go*.

Begin with the short sounds of the vowels because many words a beginning reader meets record the short vowel sound.

It might be helpful to make "short vowel cards" (stand, ham) for your students. As with consonants and blend cards, the vowel guide can be used by students to attack unknown words in initial reading material. We then progress to the sounds of long vowels. Have the students add "long vowel cards" to their files.

Our discussion has purposely omitted a number of commonly taught generalizations for dealing with the long and short sounds of vowels. Many reading specialists argue that students can be provided with a number of flexible alternatives for working out the pronunciation of words without being taught inconsistent generalizations.[47] These strategies involve using visual clues to vowel sounds. The following steps will help students cope with the variability of vowel sounds:

(a) Have the student consider the context of the sentence and the sound of the first letter of the unknown word.

Does the context and the sound of the initial consonant result in an auditory association of the unknown word?

(b) Make a quick visual analysis of the word and determine the position of the vowels:

1) If there is one vowel in the beginning or middle, try the short sound (closed syllable—man).
2) If there is one vowel and an *e* at the end, try the long sound (kite).
3) If there is one vowel at the end, try the long sound (open syllable—go).
4) If there are two vowels in the middle or end, try the long sound of the first vowel (except with the diphthongs oi, oy, ou, ow—train, flee).

d. *Phonics generalizations*

Some reading programs advocate the teaching of a number of phonics principles or rules for guiding students to decode difficult sound values of unknown words. Rules such as, "When two vowels go walking, the first one does the talking," are commonly posted in many school classrooms. However, approximately 50 percent of the time this rule does not work (chief, house, moose, etc.). In selecting phonics generalizations for teaching we must be concerned with their utility or transfer to reading situations. Spache and Spache [47] have outlined nine generalizations, plus a visual analysis procedure for dealing with the vowels, that will give students the power to unlock many of the words encountered in initial reading.

Each principle is followed by two inductive exercises which you can use to develop an awareness of the operation. Use words that are known to the student; as always we progress from meaning to analysis.*

1. When the letter *c* is followed by *a* or *o* the sound of *k* is likely to be heard.

(a) Before this activity is undertaken, establish the concept that *c* sometimes has a hard sound as in *c*argo and *c*an, and sometimes a soft sound as in *c*enter and *c*ity. Use

*All phonics instruction contains three basic components: (1) auditory discrimination, (2) auditory-visual discrimination, (3) application in a reading situation.

words from the student's vocabulary notebook for this activity.

Place several illustrations depicting words beginning with *c* followed by the vowels *a* or *o* (cable, coke, cabin, cash, and coat) on the board. Write names for the objects on cards and have the student pronounce each word and place it in the appropriate category. When all the items have been labeled call attention to the vowels following the initial consonant. Ask what the *c* sounds like in these words (the *k* sound).

(b) Select several pictorial items from magazines that contain the initial consonant *c* followed by *o* or *a*. Have the student say the name of the illustration. With what letter does each word begin? Does it have the hard or soft sound? Write the words and ask what vowels follow the consonant *c*.

2. When *c* is followed by *e* or *i*, the sound of *s* is likely to be heard.

(a) Review the hard sound of *c* developed in the preceding activity. Review the point that *c* also has a soft sound as in cider, cite, cent, etc. Write these words and have the student pronounce them. Ask what vowel letters follow the consonant *c*.

(b) Select several sentences in which the *c* is the initial consonant, conforming to the generalizations numbered 1 and 2: Boston is a large c—— (city, car). After the sentences have been completed, ask the student to pronounce each pair of words and note the hard and soft sounds of *c*. What sound does *c* have when it is followed by *e* or *i*?

3. When *c* and *h* are next to each other, they make only one sound.

(a) Select several words from the student's vocabulary notebook that begin with *ch*. Have the student pronounce them. Next, drop the *h* and have the student pronounce each word again (chase-case, champ-camp, chat-cat, etc.). Ask what the *ch* sounds like—*c* or *h*. Can the student draw the conclusion that *ch* has only one sound? Review the language episode approach for several variations of this activity. The student should underline each *ch* that appears in his selection.

(b) Select several words in which the digraph *ch* is used. (Make certain that the *ch* records the same sound.) Have the student match the words with illustrations. Call attention to *ch* and discuss the sound of the two consonants.

4. *Ch* is usually pronounced as it is in *kitchen, catch,* and *chair,* not like *sh,* as in *shirt, cash* and *washer.*

   (a) Print two lists of words, the first containing words which have the *ch* sound and the second of words which contain the *sh* sound. Ask your students to pronounce the words and call attention to the difference between the *sh* and *ch* sounds.

   (b) Refer to an experience episode that has several *ch* and *sh* words. Instruct the student to read the chart silently. Write *sh* and *ch* words on the board, calling attention to the different sound value of each digraph. Have your student underline and pronounce similar words in his language episode. Can your student supply other words that begin or end with *ch*?

5. When two of the same consonants are side by side (double consonants), only one is heard.

   (a) Select several words from the student's vocabulary notebook that end with a double consonant (well, tall, egg, tell). Write the words on the board and have the student pronounce them. What does he notice about the sound of the double consonants?

   (b) Select several known phonograms such as -all and -ell. Have the student make other words with his consonant cards such as fall, tall, mall; fell, tell, bell; etc. Relate these words to experience charts or use them in sentences. Call attention to the sound value of the double consonant.

6. When there is one *e* in a word that ends in a consonant, the *e* usually has a short sound.

   (a) Before beginning exercises involving this principle, review the short sound of the vowels by referring to the student's vowel chart. Select several words from the vocabulary notebooks that have one *e* and end with a consonant. Have the student pronounce each word and decide whether it has the short or long sound. Suggest other words: bet, get, set, let, bed, Ted, dress, led, and fed.

   (b) Select or write an experience episode. Underline the

words which have an *e* and end in a consonant. Have the student read the story and call attention to the vowel and final consonant. What is alike about the sound of the vowel in these words? A brief exercise with words that conform to this generalization can help to establish this principle. For example, select a short paragraph and have your student underline the words with the short *e* sound: Two men met Ben.

7. Words having the double *e* usually have the long *e* sound.
   (a) Use the vowel reference chart to review the long and short sound of *e*. Select several words that have a double *e* such as bee, tree, meet and see. Ask the student to place these words in sentences and read them. Ask what vowel sound is heard in the words with double *e*.
   (b) Have the student select other double *e* words from his vocabulary notebook. Call attention to the long sound of *e*. Another variation of this activity is underlining words in experience episodes that illustrate this generalization.
8. When *y* is the final letter in a word, it usually has a vowel sound.
   (a) Using letter cards, write the phonic element *ry* and ask the student to make several words through consonant substitution (cry, dry, fry, pry, and try). Say the words and inquire about the sound of *y*. Select other words ending in *y* (happy, very, Freddy, etc.) and compare the sound of *y*.
   (b) Select several words from your student's notebook ending with *y* (fly, buy, monkey, money, fry, turkey), and help the student generalize that *y* at the end takes the sound of the vowel "long i" or "long e." For further practice direct the student to separate words ending in *y* into two lists, depending on the vowel sound. Then have the student underline all words ending in *y* in an experience episode and ask which letters in the words have a vowel sound. From this activity he should be able to conclude that when *y* is a final letter it usually has a vowel sound. Ask for other words to illustrate this generalization.
9. The letter *r* gives the preceding vowel a sound that is neither long nor short.
   (a) Select several monosyllabic words that end in *r* from

the vocabulary notebook. Write the words on the board and have the student note the sound of the medial vowel (car, far, tar, for, sir, etc.). In another column write the same words, substituting the *r* for a consonant (car-can, far-fan, tar-tap, for-foe, etc.). Have the student compare the sounds of the vowel in both situations. Why does the vowel sound differently?

(b) Have your student underline words in an experience episode in which the vowels are followed by the letter *r*. Write the responses on the board and call attention to the effect of *r* on the vowel. Discuss the generalization.

Efficient readers use a combination of many word recognition skills to decode unfamiliar words. Therefore, in teaching phonics, other word recognition skills should be presented simultaneously. For example, in the following sentence, the unknown word is *turkeys*: "He raises pheasants, wild geese, and wild *turkeys*." The student may attack this word by using the sense of the sentence (context), the initial letter "t" (phonics), and the ending "s" (word structure). The major goal of word recognition training is flexibility in attacking words that are unknown only in their printed form.

Phonics instruction does not have to be formal, isolated work. Integrate these generalizations as you focus on various aspects of the student's reading program. Your major objective should be the inductive application of these aids.

Briefly, the major ideas regarding phonics can be summarized as follows:

a. Auditory training must unfold concurrently with instruction in phonics.

b. Phonics work is begun by using known words (sight words) from the student's experience episodes.

c. Phonics instruction should not be separated from the art of reading, applying known phonic elements to unknown words.

d. Students should be encouraged to utilize other clues to word meaning simultaneously with phonics, such as illustrations, context, and structural skills.

B. *Structural Analysis*

The purpose of teaching word structure is to develop the skill of working out the meaning of new words by recognizing larger, meaningful units within words (roots, endings, compounds, derivatives). Making an accurate visual analysis of words and utilizing phonic skills are mutually complementary operations. The structural analysis content for Stage I of reading progress includes:

1. Inflectional endings (additions to words, *s, ed, ing*).
2. Compound words (roots).
3. Suffixes.
4. Prefixes.

1. *Inflectional endings*

Inflectional endings (s, ed, ing, er, est, ly) are presented in the first stage of reading. An inflection is an addition to the end of a word and is a consequence of orderly language change from Latin to English. Inflectional endings involve changes in visual patterns, meanings, and phonic elements. The major teaching goal is to have the student observe the structural changes and associate the proper language sounds with the letter combinations. Examples of exercises for dealing with inflectional endings on nouns, verbs, and adjectives include: chair, chairs; host, hosts, hostess; work, works, working, worked; and small, smaller, smallest. Generate a number of exercises using inflectional endings from your student's language episodes. Also isolate words as opportunities occur, such as: (1) "John and Larry ____ (works, work) at the factory"; and (2) "Michael began to _____ (laugh, laughing). Systematic and functional practice will give the student considerable facility in recognizing familiar root words with inflectional endings.

Several root words can be selected from vocabulary notebooks and discussed as new words are formed by adding inflectional endings such as:

Base word	*s*	*ed*	*ing*
love	loves	loved	loving
cook	cooks	cooked	cooking
rain	rains	rained	raining
drive	drives	drove	driving
phone	phones	phoned	phoning

2. *Compound words*

Compound words are composed of two or more words which retain their original pronunciation. Work with compound words provides many opportunities for students to employ different word recognition aids simultaneously. When a new compound word is encountered consisting of two or more root words already in our student's listening and speaking vocabulary, the word may be divided by word structure (roots), and then analysis may be used to complete the identification. The context serves as a check on the appropriateness of the word.

The most functional approach for developing an awareness of compound words is to begin with words from the student's vocabulary notebook. List several compounds and instruct your student to separate the roots. This activity could be expanded by presenting several sentences in which students must supply or select a compound word.

Compounds	*Statements*
salesman	1. A writing machine
typewriter	2. A person who sells
taxpayer	3. One who pays taxes

Additional activities for recognizing compound words include variations of the following exercises:

(a) Recognizing compound words in sentence context by separating each compound word.
   1.) The old lighthouse saved many ships from certain disaster.
   2.) During the hurricane season, radio stations broadcast storm warnings every fifteen minutes.

(b) Building compound words.

birth	under	blow
sword	river	high

_____ size	_____ fish	_____ way
_____ day	_____ bank	_____ out

3. *Suffixes*

Suffixes are usually presented before prefixes; however, this is not to suggest that all of them be taught before prefixes. If the student meets the word "indirect", his attention certainly should be called to the meaning of the word as it is used in context. The main understanding regarding suffixes is that they contribute little to the meaning of the base word, rather they enable the author to use the root word in a different way. A number of common suffixes include: -able, -age, -al, -ance, -ant, -ary, -body, -en, -es, -ful, -hood, -ier, -ion, -less, -n, -self, -some.

Exercises for directing attention to modification in usage might include:

(a) Select several suffixes that record a common meaning such as "a person or thing that does something."

er: hunt + er
sing + er

or: conduct + or
collect + or

ist: type + ist**
violin + ist

(b) Select several nouns or verbs and have students add adjective suffixes (ful, ive, able, ous) to fit a particular context, such as:

"The (*victorious*) football team paraded proudly down the street." victory

"We had a (*delightful*) time at the party." delight

4. *Prefixes*

Prefixes (a, un, re, dis, in, etc.) added to root words produce a new meaning, usually with significantly different denotations such as: happy, *un*happy; place, *dis*place; and do, *re*do. The formal teaching of meaning changes that occur with prefixes is usually done late in Stage I, with primary emphasis as part of vocabulary development at the intermediate and pre-GED levels.

The structural analysis content for Stage II will be reviewed in another section. Briefly, the major goals of word structure beyond the primary phase of reading include: syllabication, prefixes as meaning and visual units, and the grammatical function of suffixes.

The structural analysis content for the first stage of reading progress can be summarized as follows:

a. Inflectional endings (s, ed, ing)
b. Roots
c. Doubling the final consonant and other word form changes
d. Compound words
e. Contractions (can't, don't)
f. Possessive forms ('s)
g. Suffixes
h. Prefixes

C. *Context Clues*

Awareness and use of contextual aids have long been considered important clues to word recognition and meaning. Like any other reading skill, context clues are best learned by direct teaching and

**At the second reader level, call attention to the change in word form when adding -ing (take-taking), -ies (try-tries), doubling the final consonant (drug-druggist), etc.

continuous attention. Particularly with initial readers, picture clues constitute a kind of context clue. With pupils, pictures and visual aids can be skillfully employed to develop an "anticipatory set" for reading. As we shall see later, comprehension in reading in the content areas is expedited when the interpretation of many pictures, diagrams, maps, and tables is required. At Stage I of reading progress, the major types of context clues include:

1. *Verbal clues*, where the language patterns of the printed material closely resemble the way a student speaks, and the sentence before or after gives an indication of probable meaning.

"Marie works in a store that sells *material*. She likes her job very much.

2. The student's *experience*, which provides a story association avenue for an unknown word in printed form.

"The woman *shopped* for bargains at the market."

A more detailed discussion on techniques for getting meaning from context clues has been reserved for Stage II of reading progress.

A number of activities can be used at Stage I to build contextual facility including the following:

(a) Delete nouns and verbs from language episodes and have students supply substitutes.

(b) Select words of similar configuration, needed to complete a sentence:

The men _____ for the parts. looked laughed

Mrs. Clarke had _____ in her pocketbook. money monkey

All the women _____ Mary went to the hospital.
except expect

(c) Record several short passages on audio tape and have students write the missing words.

(d) Provide opportunities for students to use words that are spelled alike but have different pronunciations (homographs):

"Please *read* Mrs. Jones' recipe."

"I *read* the directions yesterday."

D. Combining Context, Phonics, and Structure Clues

One major outcome of the instruction of stage I of reading

progress is the development of flexible skills and knowledge that enables students to recognize words already known and to help approximate the sounds of unknown printed words. This process enables the student to transfer meaning from the recognized sound pattern to the printed form of the word. The principal teaching objectives include recognizing words rapidly with a minimum of analysis such as (skill); identifying partially known words with little analysis (skills, skilled); and using context, phonics, and structure clues simultaneously. "The old man was a *skilled* craftsman, he could repair almost anything quickly and without effort."

The following are kinds of exercises that facilitate rapid and accurate visual analysis:

1. Exercises making choices among variant endings in context.
   It was a hot day; the men were w——— hard to complete the job.
   works worked working
2. Supplying the correct word using common blends.
   The driver put on his br——— when he saw the children.
   brag brakes breed
3. Exercises using partially similar compound words.
   We were cooking hotdogs in the fire———.
   firefly fireplace fireman.

Acquiring facility with word recognition aids is a progressive and difficult task. It involves the development of highly interrelated and versatile skills. The major source of trouble in word recognition is the failure to establish *basic learnings and inability to maintain a balance among them*. The best approach for teaching these skills is to have pupils use these techniques with meaningful reading material. Bond and Ticker provide a number of valuable suggestions for correcting word analysis problems.[7]

E. *Some Notes on Teaching Spelling*

Teachers often express concern to the writer about the spelling program for older beginning readers. A basic principle for teaching spelling is that the program should be in the student's *reading vocabulary*.

The ability to spell relates closely to visual memory. Most adults (and children) have a tremendous sense of phonology; that is, they can spell words by the way they sound. For example, *laugh* is quite frequently spelled *laff* by beginning readers. It is the strength of the student's visual memory of the word that makes accurate repro-

duction possible. You can use the following exercises to test visual memory, as well as devise similar exercises for instructional practice:

PRE-TEST FOR VISUAL MEMORY

Directions to students: This is a test to find out how well you recognize the words you see. As a word is flashed on a card, find it in the box on your paper and draw a line under it.

Teacher's Flash Word List

1. resentful
2. family
3. recognize
4. marriage
5. pension
6. children
7. home
8. hospital
9. police
10. salary
11. rent
12. meaning
13. insurance
14. locked

Student's Paper for Visual Memory Test

1. restful
   rested
   resenting
   resentful etc.

The following procedure (steps) can be used to help the student achieve spelling mastery. Instruct the student as follows:

1. Say the word.
2. How many syllables does the words have?
3. Does the word spell the way it sounds?
4. Are there any familiar parts within the word?
5. Are there any difficult parts in the word?
6. Look at the word, then close your eyes and try to visualize the word.
7. Look at the word again, then cover, write the word and then check.

VISUAL MEMORY TEST

Place these twenty words on flash cards:

1. descendants
2. laborer
3. principals
4. sensible
5. unusual
6. succession
7. underwrite
8. temperament
9. compliment
10. photography
11. developed
12. ecology
13. uniformed
14. miniatures
15. quantity
16. ninety-ninth
17. acceptance
18. influence
19. guardian
20. initiation

Duplicate these four-word groups, preferably in boxes, for your students. Instruct the student to underline the word he sees as you flash each card.

1.	dependents	descents	descendants	defendants
2.	laborers	labor	labored	laborer
3.	principals	principal	principles	principle
4.	senator	sentence	sensible	sensitive
5.	unusual	usually	useful	utensil
6.	successive	successor	suppression	succession
7.	understand	unnecessary	underwrite	undertake
8.	temperate	temperament	temperamental	temperature
9.	compliment	complement	compliments	compilation
10.	photography	photoplay	phonograph	photographer
11.	development	developer	enveloped	developed
12.	ecological	economics	economically	ecology
13.	uniform	uninformed	uniformed	informed
14.	ministers	miniature	minutes	miniatures
15.	quality	quantity	qualify	quantify
16.	ninety-ninth	ninety-nine	ninety-[illegible]	ninety-fourth
17.	accession	acceptance	acceptor	accidence
18.	inference	influencer	influence	inflation
19.	guardian	guidance	guardman	guardians
20.	initiate	intention	imitation	initiation

The following list contains words which most frequently occur in written communication. Avoid teaching these spelling words as drill or rote in isolation. Include spelling as a functional part of your total language-communication program.

SOME USEFUL SPELLING WORDS
(Fitzgerald List)[17]

a	aunt
about	away
after	baby
afternoon	back
again	bad
ago	ball
all	basket
almost	be
along	because
also	bed
always	been
am	before
an	best
and	better
another	big
any	bird

apple
are
as
ask
at
bought
box
boy
bring
broke
brother
brought
brown
but
buy
by
cake
call
came
can
candy
can't
car
cat
cent
chicken
children
Christmas
clean
clothes
coat
cold
come
corn
could
cousin
cow
cream
cute
daddy
dance
day
dear
December
did
didn't
dinner
dish
do
dog
doll
done

birthday
black
blue
book
both
Easter
eat
egg
eight
end
ever
every
everybody
eye
far
farther
fell
find
fine
first
fish
five
flower
football
found
four
for
Friday
friend
front
fun
funny
game
garden
gave
get
girl
give
glad
glass
go
good
good-by
got
grandmother
green
ground
gym
had
Halloween
hand
happy

down
draw
dress
drill
each
present
pretty
program
put
rabbit
radio
rain
road
real
recess
red
ride
right
ring
room
rope
run
said
same
sand
Santa Claus
Saturday
saw
say
school
see
send
set
seven
she
shoe
should
show
sick
side
sing
sister
sit
six
skate
sled
sleep
snow
so
some
something
sometimes

hard
has
have
he
head
stay
still
stocking
stop
store
story
suit
summer
Sunday
supper
swim
table
take
teacher
tell
ten
than
thank
Thanksgiving
that
the
their
them
then
there
they
thing
think
this
three
threw
through
time
to
today
together
told
too
took
town
tree
turkey
two
uncle
until
up
us

song	use
soon	vacation
spelling	valentine
spring	very
start	visit
walk	who
want	whole
warm	why
was	will
wash	winter
water	wish
way	with
we	won
wear	wood
week	work
well	would
went	write
were	year
what	yellow
when	yes
where	yesterday
while	you
white	your

Summary

The basic skills and techniques necessary for helping the beginning reader to decode many words that are unknown to him only in printed form have been discussed as the reading program for Stage I. The major feature of this stage is the acquisition and the use of a sight vocabulary. Teaching tasks can be summarized as follows:

Stage I—Learning to Read

A. *Preparation*
   1. Oral language and concept development
   2. Auditory and visual discrimination
   3. Sight vocabulary
   4. Recognition of letters
   5. Directionality

B. *Beginning reading*
   1. Extension of sight vocabulary (25-100 words)
   2. Word meaning clues (verbal and experience)
   3. Phonics and structural analysis

C. *Application of the skills*
   1. Extension of sight vocabulary
   2. Refinement of phonic and structural skills
   3. Independent reading
   4. Comprehension practice

V. Stage II–Reading to Learn

Stage II of reading progress involves a crucial transition period for most older students since the emphasis is now on "reading to learn" rather than "learning to read." During the first stage of reading development we concentrated on giving students some functional decoding skills that would help them move successfully from speech to print. Most of the words students met were in their listening and speaking vocabularies. At Stage II, however, many words and concepts will transcend the immediate experience of students. An awareness of the specific requirements of this Stage of reading progress will greatly enhance teaching effectiveness.

The Characteristics of Stage II

In addition to working with the skills introduced in Stage I, guidance must now be provided in dealing with a large number of even more complicated reading tasks. The transfer and application of reading competencies previously taught also become more complex. For example, a technical guide for automotive assembly may contain a number of new and difficult concepts as well as many unknown sight words. While older students have had many opportunities to interact with their environment, many have not dealt with verbal concepts in specific subject matter areas. The major instructional goals for Stage II include:

1. Diagnosis and selective review of the *basic decoding skills*—context clues, phonics and structural analysis.
2. Development and extension of a reading vocabulary.
3. Furthering *comprehension*, since materials may now transcend the reader's experience.
*4. Providing facility with *study skills*.
*5. Specialized reading skills.
*6. Fostering *critical reading* skills.
*7. Encouraging wide *functional, independent, and recreational reading*.

A. *Vocabulary Development*

Word-recognition skills are to be reviewed and extended during

*Items 4 through 7 are discussed in Chapter 6.

Stage II. The specific tasks include all those taught at the beginning reading level. A reasonable perspective is necessary in presenting basic word-attack skills at the immediate level. One of the real dangers is to assume that all pupils are proficient in these skills. On the other hand, a disproportionate amount of time may be given to teaching decoding skills (phonics and word structure) which function only with words that are in the student's auditory vocabulary. A recent study, for example, revealed that teachers were spending as much time on phonics instruction in grade 4 as in grade 1.[40] The diagnostic instructions discussed in Chapter III will provide data for assessing facility with basic word recognition tools.

A significant distinction between the preceding stage of reading progress and the intermediate level is the emphasis on *word meanings and concepts*. Vocabulary growth can occur only when the students become acquainted with the multiple meanings of words, learn specific and generic meanings, interpret idiomatic expressions, and develop functional speaking and writing skills. Stauffer [48] uses the following table to contrast the differences in reading requirements between Stages I and II:

TABLE I

Concept Differences Between Stage I and II of Reading Progress

Stage I	
Known word meaning	Experience
Known oral language usage	Speaking
Unknown printed symbols	Reading
Stage II	
Unknown word meaning	Experience
Unknown oral language usage	Speaking
Unknown printed symbols	Reading

The contrast between Stage I and Stage II is important for generating appropriate instructional goals. During initial reading, the skills are primarily those of structural, phonic, and contextual analysis. These earlier phonic and structural skills now provide the foundation for dictionary use, including syllabication, accent marks, and phonetic spellings. Initial training in context clues is essential for abstracting dictionary definition and in selecting the meaning that fits the context.

From the standpoint of intellectual growth, the single most important educational achievement is the progressive mastery of word

meanings and the attainment of concepts which are fixed by words. All intelligence tests contain measures of vocabulary maturity. The acquisition of concepts is contingent mainly upon experience with our language. Word mastery depends heavily upon experience which, in turn, provides background knowledge for relating meaning to abstract words and ideas.

Brunner and his colleagues have studied the process of concept attainment and, like others, concluded that experience is a significant element for concept association.[9] For example, after discussing the characteristics of "social mobility" with the class, consider their dilemma in accurately identifying the attributes of a "social-mobile" person. They will first attempt to deal with the attributes or characteristics in other situations. For example, will A, B, C accurately describe the new context? Only after many different subsequent encounters with the concept will the attributes or validation process be sufficiently refined as a stable idea. All mental activity involves the process of categorizing information.

The field of reading is indebted to Dr. Lee C. Deighton for his work in the area of vocabulary development.[13] His book provides many empirically tested techniques for the development of vocabulary as well as considerable insight on the rationale of language operation. Words provide the labels for concepts. The agenda for promoting vocabulary development with older students includes: (1) providing experience, (2) encouraging extensive independent reading, and (3) direct word study.

1. *Experience.* Readers never acquire all the meanings that a word represents with any one encounter. Understanding comes from experience, not from a dictionary. As experience broadens, meanings expand. One forty-year-old female student was able to decode and pronounce the word "inflation," but a brief discussion revealed that she had an obscure notion of the word. Her teacher led her through several direct and vicarious experiences to amplify the meaning of the term, including pictures from an adult article in *Life* magazine, comparison of shopping ads, and personal encounters. Several days later the same student dictated the following language episode:

Sally Fights Back

My friend Sally went to the market yesterday. The price of food was very high because of inflation. *She felt like crying. Then she had an idea to beat the prices. She would grow vegetables in her garden. In the fall she would can or freeze them. She would have her very own grocery store at home. Then she would laugh at high prices caused by inflation.*

There should be many opportunities for the class to take field trips. However, first-hand experience may be provided within the school by demonstrations and laboratory work. A number of science concepts, for example, can be developed by examining the structure of plants and observing the influence of different factors on plant growth. The media of instruction, pictures, films, etc., offer a tremendous enlargement of experience. The following considerations will help optimize the role of experience:

a. Planning is essential. Since the meanings to be achieved in reading are determined by the nature and clearness of the concepts, experiences must be made to yield precise and accurate meanings. Use of consumer education materials, films and filmstrips dealing with coping skills, and magazines will help to develop and clarify concepts.

b. Students should be given an opportunity to discuss and clarify their interactions. The acquisition of concepts is dependent upon frequent opportunities for the student to verbalize and classify his encounters. Language deprivation is usually the consequence of a lack of opportunity to discuss experiences.

c. Putting ideas in writing also helps to clarify and amplify word meanings. Spelling instruction can most logically be incorporated with writing activities.

2. *Extensive, independent reading* also widens vocabularies. Each new book, story, or article should introduce at least one or two new words and concepts in a variety of contexts. Repetition of sight words in different contexts also amplifies and clarifies meanings. Encouragement and guidance in wide reading can lead to exploration of many facets of experience, extend interests, and insure contact with many new words. An independent reading program is strengthened by the presence of many paperbacks in your classes.*

3. *Direct methods of vocabulary study* have also proved to produce superior growth.[10] However, word study can be profitable in developing meanings only to the degree that it is integrated with the function words render in context. Several research studies have concluded that the unnatural isolation of words in lists divorces them

*A major concern of many adult basic education teachers is the availability of a suggested list of paperbacks at different reading levels. A bibliography of adult independent reading titles may be obtained from the Reading Clinic, University of Maine at Portland-Gorham, Gorham, Maine.

from the contextual settings which determine their particular meanings. Teaching vocabulary should include techniques that have practical utility and maximum transfer value. Students cannot possibly be taught all the words they need to know in subject or vocational areas, but they can acquire skills that will aid them in adding to their vocabularies independently. Some techniques for word study include:

a. *Context clues.* The development of vocabulary through context is a developmental process and grows with the reader's background and opportunities to read. The research on the utilization of context clues can be summarized as follows:

   (1) Words that follow a strange word are more likely to aid contextual analysis than those that precede it.
   (2) Utilization of this skill requires considerable inferential ability, which must be taught.
   (3) Context frequently reveals meaning by outright definition, using signal words (such as, like, etc.).
   (4) Unfamiliar words may be frequently explained by the use of modifiers.

Awareness and use of contextual aids are important clues to word recognition and meaning. Like any other reading skill, context clues are best effected by direct teaching and continuous attention. Particularly with beginning readers, illustrations and picture clues constitute a kind of context clue. With pupils, visual aids can be skillfully employed to develop an "anticipatory set" for reading. The reader knows he will meet certain words. As we shall see later, comprehension in reading in the content areas is expedited when the interpretation of many pictures, diagrams, maps, and tables is required.

With practice, students can be guided in deriving the meaning of unknown words by studying the context in which they occur. For example, the word *blipe* may be encountered in a technical manual, but what does it mean? Students can utilize phonic and structural skills to work out the pronunciation of the word—the consonant blend *bl* and a visual analysis of a medial vowel and a final *e* give a clue to a long vowel sound. Phonic and structural skills quickly break down when the student does not have an auditory association for the word or fails to identify a familiar element. Consider the following sentences:

(1) Mrs. Adams bought a *blipe*.
(2) She bought the *blipe* at the grocery store.
(3) She bought the *blipe* at the grocery store at the meat counter and cut off its tail and fins.

Many studies have stressed the importance of direct practice in utilizing context clues by encouraging the use of inference. Students should be encouraged to guess or make a hunch about the meaning of an unknown word. They should be reminded to read the remainder of the sentence or passage and then refer back and attempt to deduce the meaning of the unknown word. The teacher should call their attention to other clues such as the initial letter, phonic elements, or a familiar syllable.

Context Clues

McCullough [33] has suggested seven common types of context clues that should be developed: *

(1) *Definition*—The unknown word is defined in the passage.

> Come into our *domicile*. This has been our home for the last seven years.

(2) *Experience*—A past concrete experience may supply a new word to a student.

> The movie was produced in *technicolor*.

(3) *Comparison or Contrast*—The unknown word is compared or contrasted with a known word.

> The room was not *spacious*; it was small and cramped.

(4) *Synonym*—This clue uses a known synonym for an unknown word.

> Such a *multitude*! It was the largest crowd I'd seen in years.

(5) *Familiar Expression*—Familiarity with a common idiom supplies this clue before the speaker completes it.

> Thanks, Jake. An extra five bucks always comes in *handy*.

(6) *Summary*—The new word summarizes the ideas that precede it.

> Labor and management often dispute. Disputes are sometimes referred to neutral agents. *Arbitration* is a means to an early settlement.

(7) *Reflection of a Mood or Situation*—The general tone of a passage may suggest a word's meaning.

*The common types of context clues are isolated and discussed to establish some criteria for selecting and using instructional materials. The writer has frequently reviewed instructional material which has had only a remote relationship with the "skill" it purports to practice.

The man tried to tell himself he was fine, but his head was spinning and his stomach was queasy. He felt very *peculiar*.

Students should not be burdened with learning the technical term for the particular clue he is using—the aim is to enable the learner to use the sense of the sentence as a means of deducing the probable meaning of a word.

Assessing Ability to use Context Clues

Teaching students to use context clues should be based on a precise diagnosis, including words that provide functional application of this skill. The writer uses two techniques that can be modified for any reader level and content area requirements. The first is an adoption of the method recommended by Timan and Santersanio, which involves printing a list of vocabulary words on 3×5 cards and asking students to pronounce them and tell what they mean.[49] A list of unknown words is then evolved and placed in context. The writer allows students to read the sentences, silently first followed by oral rereading.

The test utilizes the different types of context clues outlined by McCullough.[33] The student is asked the meaning of the unknown word which is not identified until after the reading. His facility to derive the meaning of unknown words is analyzed according to three categories on the Timan and Santersanto scale modified by the writer. For example, the words "ablaze," 'teeming" and "terror" were presented in the following sentences:

"The farmhouse was *ablaze* and the barn was burning, too." (synonym)
"The meeting house was *teeming*. It was so crowded, people had to stand." (definition)
"Mary was not brave; as the bear came near she was filled with *terror*." (comparison-contrast)

Informal Context Clues Test

	Stimulus Words: Ablaze	Teeming	Terror						
A. Pronunciation									
1. Instant									
2. Pauses/pronounces	✓		✓						
3. Immediate comprehension		✓							
4. Utilizes phonics and structure clues									
B. Meaning									
1. Indiscernable understanding	✓								
2. Uses other parts of the sentence-context		✓							
3. Cannot derive meaning			✓						
C. Attitude									
1. Confident	✓	✓							
2. Frustrated			✓						

Types of Context Clues:[33]

1. Definition
2. Experience
3. Comparison or Contrast
4. Synonym
5. Familiar Expression
6. Summary
7. Reflection of a mood or situation

An examination of the worksheet reveals that the meaning of the first two words was derived from context, although there was some problem pronouncing the second word. The student was able to decode the third word but unable to reduce meaning from

context. In addition, it was possible to determine what specific kinds of context clues cause difficulty and provide practice with them. This technique affords the teacher an opportunity to personalize the teaching of vocabulary.

Another variation for assessing contextual usage is to substitute nonsense words for words that can be amplified by context. This technique is useful for group diagnosis. What words in the following sentences reveal the meaning of the underlined nonsense words?

"Some people fix things, other people *plam* them."

"Don't *tine* him, he needs time to work the problem out for himself."

Teaching Activities

(1) Completion sentences are useful in developing the ability to anticipate unfamiliar printed words.

Cars have four _____.
Apples grow on _____.

(2) Completion sentences in which there is more than one possible answer may be used. In the sentence below the student should be asked to tell *what* this missing word could be.

> Since 1966, the United States has increased its air _____ rate by 5 million tons of pollutants annually. Air pollution _____ taxpayers 13.5 billion dollars in 1969. It destroys _____ hose, windshield _____ blades, and darkens _____ so that only 60 percent of the sunlight gets through.

(3) Choose a page in a text which contains several words whose meanings are not entirely clear. List the unclear words and give copies to the students. With the list, read the sentence aloud which contains an unknown word, encouraging students to note any clues within the sentence or passage that might help to determine its meaning. Students should be permitted to form habits of inferring the meanings of the words; however, reference to the dictionary should be made if the meaning cannot be obtained from the context, or when the accuracy of the proposed meaning needs to be checked.

(4) Provide independent silent reading practice using exercises such as "The word *ground* has several meanings. Check the sentence which shows how *ground* is used in this story."

(a) Farmers in Aroostook County plant potatoes after the frost leaves the *ground*.
(b) The salt was *ground* into the ice.

(c) We have no *ground* for complaining about his work.
(d) The police station is on the *ground* floor.

(5) Provide oral exercises which give the student practice in listening to shifts in meanings of familiar words. Example: Read a paragraph from a story aloud, using various meanings of a word such as *set*. Write other sentences on the board using the same word with various meanings and discuss. Read the paragraph a second time instructing the student to listen to the key word *set* and derive meanings from context.

The use of the context clue serves as an important aid for adults in identifying the meaning of an unknown word. When combined with other word recognition techniques, it is particularly helpful because it places continued emphasis upon reading for meaning.

b. *Structural analysis*

Structural analysis training at Stage II includes inductive practice in accent; teaching structural elements (prefixes and suffixes); and visual analysis of word units or elements (syllabication). The goal of the instructor is to enable the reader to identify roots or familiar elements in multisyllabic words that may trigger pronunciation and even meaning. Structural signals can be used in word attack because they provide a consistent pattern.

There is considerable difference of opinion regarding the selection and teaching of prefixes, suffixes and roots at the second stage of reading progress. Deighton [13] expresses strong doubts about the common teaching of structural characteristics such as roots and affixes. He points out that these have multiple meanings and hence are confusing if interpreted literally:

> Perhaps the most limited aspect of traditional word analysis is that it results in *a* meaning for a word. There is only one literal meaning. There are, of course, many English words with only one current meaning. *Prehensile* is one of them. However, most English words have several meanings, and those words in commonest use have the greatest variety of meaning.

(1) *Combining Forms*

To overcome these difficulties, Deighton has evolved a program for word analysis that consists of multiple clues based upon how the word is used in context. The first step is to establish meanings for 26 combining forms for words which have stable, invariant meanings. These units will help the reader unlock more than 200 English words. His modified list is as follows:

anthropo—human being
auto—self propelling
biblio—book
bio—life
hydro—having to do with water
iso—to be apart
lith—of stone
micro—small
multi—many
neuro—of nerves
omni—all, everywhere
pan—all, completely
penta—five
centri—combining form
cosmo—universal
heter—different
homo—similar
phil—loving
phono—sound
photo—light
pneumo—air
poly—many
proto—first in time
pseudo—false
tele—distant
uni—one

(2) *Invariant Prefixes*

Another step is to acquaint students with prefixes that have regular, invariant meanings in every word of which they are a part. These include ten, which give specific, reliable clues to what the words are about:

apo—away from
circum—around
dis—not
extra—additional
hyper—more, over
hypo—less, under
mal—abnormal
mis—unfavorably
non—not
syn—along with

Two common prefixes not included in this list are *in* and *un*. The student must be cautioned that when he meets a new word bearing either of these prefixes, he must examine the context.

(3) *Suffixes*

There are 54 noun suffixes which have a fixed meaning. Of these, eight are used to form abstract nouns with the meaning of quality or state, but throw very little light on the meaning of the word (ance, ence, ation, tion, dom, ery, mony, ment). Six additional suffixes always indicate nouns but say nothing of their context (acity, hood, ness, ty, tude, ship).

None of these noun endings gives any specific clue to the meaning of the word in which it is used. They can be used to deal with a word which the student thinks is unfamiliar by reducing it to smaller, more recognizable elements of meaning. A simple technique is to have students drop the suffix and reconstruct the sentence with the shorter word. For example:

ty (condition of)	It is hoped that equal*ity* of all people will someday become a real*ity*.
ment (a result)	The insurance company gave me a fair settl*ement* for damages done to my car.
ance (a thing that is)	My uncle left me a large inherit*ance*.
less (without value)	This program is worth*less*.

The same process of word study may be observed with adjectives. Of suffixes and combining units used to form adjectives, seventeen have specific and invariant values: est, ferous, fic, fold, form, genous, scopic, wards, wise, less, able, most, like, ous, ose, acious, and ful.

Other elements that lack stability can be taught as visual units along with the syllabication content. Some frequently used prefixes include: a, ab, ad, anti, inter, pre, dis, mis, post, sub, and super. The readers attention should be directed to the root and the context of the sentence.

Assessing and Teaching Structural Elements

Several informal exercises can be devised to assess meanings of combining forms, prefixes, and the function of suffixes. An excellent source of instructional material is included in *Techniques for Teaching Vocabulary* by Dale and others.[11] The writers suggest that teachers evolve their own informal diagnostic tests, such as the following:

A. Matching roots with definitions

1.-auto	a. many
2.-cosmo	b. self
3.-poly	c. universal
4.-bio	d. similar
5.-homo	e. two

B. Matching prefixes with definitions

1.-mal	a. not
2.-non	b. badly
3.-phon	c. write
4.-graph	d. sound
5.-mis	e. wrong

Another variation involves selecting sets of words with combining

forms or prefixes and asking students to identify the meaning of elements as they are used in each cluster:

*mono*logue	*mal*function	*auto*matic
*mono*plane	*mal*administer	*auto*load
*mono*poly	*mal*nutrition	*auto*crat

C. Meaning modifications of suffixes

Students need to understand that suffixes can change the meaning or functions of words. In the following self-instruction exercise the student gains proficiency through practice in generalizing about the meaning and use of a suffix.

An assessment of suffixes involves reviewing meanings and then providing application of the elements in contextual settings. The following exercise guides students to conclude that suffixes modify the meanings of words, and in several instances, they may have more than one meaning:

	Suffix	*Meaning*	*Example*
1.	able	able to	durable
2.	ful	full of	handful
3.	ship	rank or position	leadership
4.	less	without	careless
5.	ly	describing how	softly

Place the examples in the following sentences:

1. Albert had a ——— of nails.
2. Diamonds are extremely ——— gems.
3. The balloon landed ——— on the grass.
4. A president must have ——— qualities.
5. She was ——— when she spilled the milk.

(4) *Synonyms and Antonyms*

Students soon learn that words which have the same meaning are called synonyms. Many exercises can be devised that elicit other words that mean the same as selected stimulus words. Students can be encouraged to supply words of similar meaning, select others from a list, and underline two words in a series that have the same meaning. Instruction should also provide opportunities for students to select words that have opposite meanings.

(5) *Homonyms*

Beginning readers frequently experience difficulty with words that sound alike but are spelled differently. They are often potential sources of trouble because common homonyms have similar configurations, such as: sea, see; week, weak; there, their; and here, hear. A good instructional procedure is to emphasize meaning differences through context exercises. "It did not rain; the *sun* was shining." "Mrs. Jackman's *son* recently returned from service in Vietnam."

(6) *Figurative Language and Idioms*

The pupil is frequently confronted with idiomatic expressions in both verbal and printed context. Bill may be referred to as a "Jack-of-all-trades." Television commentators may refer to election results as "sweeping the field." There are a number of terms describing different figures of speech including allegory, personification, metaphor, etc. It really isn't necessary for students to associate a particular figurative term with an example. Pupils frequently have difficulty with figurative expressions when they attempt to read them. Practice exercises should include opportunities for students to select the best possible meaning from context such as:

"My teacher *gave me a lift* to the night school."

_____a. lifted me off the ground

_____b. made me feel good

_____c. gave me a ride

(7) *Syllabication*

Several studies have raised serious questions about the utility of syllabication rules. One such study by Zuck examined the value of syllabication as an aid to decoding and spelling.[52] His objection centered on the difference between spoken and written syllables. Syllabication rules sometimes require pupils to place written syllable boundaries at points that differ from syllable boundaries in corresponding spoken words. For example, the written boundaries in words like "coastal" and "longer" are "coast al" and "long er," but when spoken, the boundaries naturally are "coas tal" and "lon ger". The word "double" is divided "dou ble" but it is pronounced phonetically "dub l". Zuck also cites other examples which involve exceptions to the rules and stresses the need to know the words before they can be syllabicated. The writer suggests that syllabication principles can most appropriately be combined with phonics,

structural analysis and dictionary work rather than be treated as a separate teaching entity. The correct way to pronounce a word can be determined by consulting the dictionary. The "correct" way to divide a printed word is of importance mainly to secretaries and editors and seldom to readers.

(8) *Dictionary Usage*

The dictionary is an important tool that students can utilize to expand their vocabularies. The concept that the dictionary is a storehouse of information about words is introduced via illustrations early in Stage I of reading progress. Teaching the major dictionary skills is usually reserved until after the third reader level has been mastered.

The dictionary is a reference tool and, like glossaries, becomes important as soon as pupils engage in any type of content-area reading. Usually the teacher discusses new words presented in the content subjects. Identification of the words through their visual form, including pronunciation, is usually completed when the word is met in its contextual setting. Using this procedure, students can develop glossaries related to special areas under study.

Teachers frequently list words for students to look up in the dictionary. Vocabulary development at Stage II of reading progress is contingent upon many varied, meaningful associations for words. Isolating words to find in the dictionary contributes nothing to this objective.

Briefly, the dictionary skills can be summarized as follows:

(a) Alphabetization skills (students should be able to arrange words in alphabetical order according to the first, second, and third letters).
(b) Guide words.
(c) Dictionary symbols, pronunciation key.
(d) Pronunciation, including accent of words, derivations, and the parts of speech.
(e) Multiple meanings of words.
(f) Synonyms, antonyms, homonyms.

Summary of Techniques for Improving Vocabularies

1. Direct and vicarious *experience* is the foundation for concept attainment.
2. Words must be studied in contextual associations.
3. Word study should involve *invariant combining forms, prefixes* and *suffixes*.
4. Students should be encouraged to keep a *vocabulary notebook*

of new words, including the specific context from which they were taken.

5. The *technical vocabulary* of the subject areas should be used as a source of words. The more inclusive the meaning to be developed, the more numerous are the associations necessary.

6. Derivation comparisons between languages should be avoided. Research is quite consistent in de-emphasizing the contribution of the study of word derivation in other languages.

B. *Comprehension*

Any reading program must provide for the development of basic comprehension abilities, that is, the process by which meanings become associated with symbols. The goal of all reading is the comprehension or the apprehension of the significance of printed symbols. The extent to which meanings are clearly and accurately understood by the reader represents the degree to which he is a good reader.

Thoreau's explanation of experience, "You will find good food and hearty drink at the Inn if you bring them with you," is true of reading. Comprehension depends upon facility with concepts or meanings evolved through experience. It is what the student brings to the reading experience that really matters. Concepts that the pupil acquires through experience must be attached to words or groups of words as symbols for their meanings.

Spache and Spache [47] comment on the teaching of comprehension:

> The term comprehension is one that is used glibly by many teachers and reading experts. Yet the meaning given the word differs greatly from one user to the next. Despite the research analyses of the process, comprehension is often hypothesized as a long list of subskills. The logical assumption is then made that each of these skills must be practiced separately—that eventually all the skills will function simultaneously while the individual is reading.

An examination of many instructional manuals for reading materials will reveal reference to numerous pages which teach specific skills, e.g., "classifying information," pages 41, 58, 68, 95; "drawing conclusions," pages 8, 19, 26, 31; etc. The assumptions underlying this practice are that skills exist discretely, that they can be taught in isolation, and that they will operate spontaneously in reading situations. For example, the following excerpt was taken from a reading selection which purported to teach the skill "following directions":

Cutting a Board

To cut a board to size, first do the crosscutting that is needed. Make the layout lines the same as for any other task. Before placing the board on the table of the saw, start the saw and let it come up to operating speed, and pass the saw back and forth through the line of cut to make sure it functions properly.

Place the board to be cut on the saw table against the guide fence and make sure the layout line is in line with the line of cut of the saw. Place your left hand to the left of the saw blade travel. Turn on the switch and pull the blade gradually through the wood. Then return the blade to the starting position.

List in order the steps involved in cutting a board to size:[32]

_____

_____

Following directions may be one requirement for successful completion of this task, but the student must also be able to organize, identify the main topic and main idea, pick out the important details, be familiar with the concepts "layout lines" and "operating speed," generalize and draw conclusions.

If comprehension is approached as a process of thinking, it is possible to program activities for its development with virtually any coping materials, technical manuals, or narrative works. Questioning is potentially the most important tool for helping students understand and interpret what they read. If questions are thought-provoking and stimulating, the student will grow in his ability to think critically about what he reads. On the other hand, if the questions are limited to facts and small details, thinking and appreciation will be shallow.

Several writers have suggested that comprehension can be most effectively developed by diversifying the types of questions we ask our students.[6, 24] This approach is particularly suitable for adult basic education classes since we are dealing with a wide achievement range and a variety of instructional materials. Questions can be classified on three levels:

1. *Literal*: the reader merely knows what the author has said, perhaps even without understanding. Types of questions at this levels include:

Who_____?

When_____?

How_____?

Where _____?

What _____?

Define _____.

Explain _____.

The literal level represents the least abstract base of thinking, and in many classes receives considerable emphasis. The writer and his graduate students have examined the types of questions in several different reading programs. Many reading exercises give a disproportionate emphasis to work at the literal level. Your task is to modify instructional materials so students can operate at higher levels of thinking.

2. *Interpretive* questioning involves a search for relationships *within* the material. The reader must search actively for the author's implications. At the interpretive level we are asking the student to use two or more sets of data (relationships) within the paragraph or selection. Note these examples of interpretive questions: [24]

(a) *Comparison* and *contrast* involve relating two sets of data within the paragraph or selection—how are the ideas the same, different, or related:

(1) How is _____ unlike _____?
(2) In what way does _____ resemble _____?

(b) *Implication* means that the student must supply evidence to support a conclusion or generalization.

(1) What would the results of this experiment mean to the social scientist?
(2) What do the actions of _____ reveal about his personality?
(3) From the following description of a _____, determine the kind of environment it might live in.

(c) *Cause-effect* requires an understanding and recognition of the events that lead to a happening.

(1) When _____ occurred, what had to happen?
(2) What three events lead to _____?

(d) *Quantitative* is similar to finding the main idea by selecting and relating several facts to draw a conclusion.

(1) What can you conclude from the following illustration?
(2) What would be a good title for this selection?

(3) Select three important circumstances that helped ——— solve his problem.

The important characteristic of this level is that the student must seek and integrate two or more relationships or sets of data within a selection.

3. *Utilization* questions require "creative," "reflective," and "expressive" thinking. It moves from the interpretive level (pulling relationships together in the selection) and applies those data to some new situations or problem. Herber defines this process as taking the product of the literal (what the author has said) and the interpretive (what he meant by what he said), and applying it to some pragmatic or theoretical exercise, using knowledge the reader already possesses.[24] The result is the generation of new concepts or ideas that go beyond the selection. The following examples of utilization questions relate to Bloom's Taxonomy.[6]

(a) *Application* is the use of inferences and concrete situations in some new and different content. The problem must be new and unfamiliar, or in some way different from examples used in instruction.

(1) The following are the basic *rules for playing badminton:* (A)— (B)— (C)— (D)—. For each of the following plays, tell which rule is involved.
(A)— (B)— (C)— (D)— (E)— and (F)—.
(2) Many economists predict that inflation will follow excessive government spending. If you were advising the Congress, considering the conditions described in the selection, what would be your advice about the following policies?
(3) After reading this article, how would you design a more efficient and safer lawn mower?

(b) *Analysis* requires very abstract thinking and is usually practiced at the upper grade levels. The ability to analyze involves not only comprehending, but also identifying components, determining how they are related and arranged, and also distinguishing between fact and opinion and relevant and irrelevant statements. The following are examples:

(1) Discuss the statement, "An apple a day keeps the doctor away." (What particulars are relevant for judging this conclusion?)
(2) Ability to recognize the tone, mood and purpose of an author.

(3) Being able to distinguish between expository and narrative writing.
(4) Read each of the following statements. Are they factual, based upon known events, or are they opinion?

(c) *Synthesis* involves putting several ideas together to form a new concept. Synthesis means pulling together several ideas and arranging them in such a way as to develop a new concept not clearly evident before. Synthesis involves divergent thinking, in that it is unlikely that the right solution to a problem can be determined in advance. Examples of synthesis:

(1) Propose several different ways to test an idea or hypothesis.
(2) Write creatively a story, essay or verse.
(3) Synthesize two or three methods for teaching a unit of instruction.
(4) Design a building/build a model according to sets of specifications.

(d) *Evaluation* can be defined as making judgments about the value of certain ideas, proposed solutions or methods according to established criteria and standards. Examples include:

(1) Judging stories or books using standards that call attention to writing style, how the topic was treated and probability of accuracy. Simply reduced, students can express a judgment based on other things they have read. Why did you enjoy the story of ———?
(2) Ability to assess the health benefits prescribed under some insurance plan.
(3) Skill in recognizing and speculating on the value of a particular end. Social legislation (pollution control, unemployment, insurance) abounds with functional opportunities for such practice. Was the government justified in closing down the starch factory?
(4) Judge the potential effectiveness of a product based upon known effects of similar brands.
(5) Allow students to generate criteria for judging a particular event, work, or course of action. When is the United States justified in intervening in the internal affairs of other countries?

Some exercises may help to make the concept of levels of comprehension clearer. Read the following paragraph and decide whether each statement that follows is at the literal, interpretive or utilization level.

Excerpt from *Discovery of a Father*

by Sherwood Anderson

My Father . . . couldn't ride for shucks. He fell off the horse and everyone hooted with laughter, but he didn't care. He even seemed to like it. I remember once when he had done something ridiculous, and right out on the Main Street too. I was with some other boys and they were laughing and shouting at him and he was shouting back and having as good a time as they were. I ran down an alley back of some stores and there in the Presbyterian Church I had a good long cry.

1. Sherwood was ashamed of his father.
2. He who plays the part of a fool loses the respect of others.
3. When Sherwood's father fell off the horse, he didn't care if people laughed at him.
4. Laugh and the world laughs with you; cry and you cry alone.
5. Sherwood had a good long cry in the Presbyterian Church.
6. Sherwood's father seemed to enjoy people.

Responses 3 and 5 are literal; they merely state facts discussed in the story. Items number 1 and 6 are interpretive statements. Response number 1 draws upon data from the last two sentences in the paragraph. Response number 6 is an inferential summary of the paragraph. Statements 2 and 4 are utilization items, using information from the paragraph placed in juxtaposition with the reader's experience. The reader applies or transfers the ideas to a new situation.

Using well designed questions that guide responses, students are aided in the development of thinking skills and in understanding content. The levels concept can be used to serve many students at varying stages of achievement in a single class in response to a single text. Groups of students can respond to assignments at different levels of comprehension.

Another examole to illustrate different levels of thinking follows below. Read the following fable and decide whether each statement that follows is at the literal, interpretive or utilization level.

JUSTICE AT ATRI

The prince of Atri, Italy, had a large bell hung in the market place. It became famous as the bell of justice. Whenever a wrong

was done, the person who felt wronged rang the bell. Then the prince came to hear the story and to give justice.

As the years went by, so many people rang the bell that the bell rope wore off. Someone fastened a piece of grapevine to what was left of the rope.

One afternoon, as all the people were taking their afternoon nap, the bell began to ring. The people wondered who was ringing the bell. They rushed to the market place. There they saw an old horse. He was lame and thin and looked as if he were starving. The horse was chewing on leaves of the grapevine because he was so hungry. In this way, he had rung the bell of Atri.

When the prince arrived at the market place, he tried to find out who was the owner of the horse. It was found that the horse belonged to a soldier. The horse had carried the soldier through many battles. Now he was old and of no value to the soldier. He had been turned out on the road to shift for himself.

The prince was angry. He saw the injustice. He said that the horse had rung the bell and would receive justice. The prince ordered the soldier to build a fine barn for the horse and to feed him the finest grain for the rest of his life.

1. "The strong should always help the weak." React to this statement.
2. Compare the attitudes of the prince and the soldier toward the horse.
3. What conclusion can we reach about the popularity of the prince's method of justice?
4. Explain how the bell of justice was used.
5. What might have happened to the horse if rope instead of grapevine were attached to the bell?

At this point you should be able to identify quickly the different levels of comprehension. Responses 2, 3, and 5 require the reader to relate two or more sets of data within the selection and, therefore, are at the interpretive level. Item 1 asks the student to place the theme of the selection in juxtaposition with his experience to consider a new concept. Number 4 merely asks the reader to recall specific information.

Use material that pupils have selected as interesting to program reading missions which will include practice in interaction at the interpretive and utilization levels of thinking. The following exercise was used with an adult female reading at approximately the third reader level.

One car dealer keeps about twenty new cars in a small lot near his showroom. In the day the cars are unlocked. The keys are left in the starter switch. This way the salesmen can show the cars with no fuss.

One day there was just one car in that lot that was locked. The key was not in the switch. It was stolen. The unlocked cars with keys in them were not stolen. The locked car was stolen.

This proves a point. If a thief wants a certain car, he can get it. A pro can unlock a door, get in, "jump" the switch and drive off in three minutes.

People who aren't pros get caught. Nine out of ten thieves are less than 25 years old. Most steal for a thrill. They often take off parts. Then they dump the car.

To the victim, car theft is a drag. You must call the police. Then you must call your insurance man. You might get the car back.

You must talk to the insurance man. Sometimes he will replace your car with one of the same value. Or he could give you cash for its present value.

Can a Car Be Theft Proof?

Some drivers spend a lot to protect their cars. They have alarms. There are some locks that tie the steering wheel to the gear shift lever. Some alarms go off if any part of the car is pulled off. Some car makers have moved the door lock parts to places where a hanger-type tool can't reach.

Don't Help Out This Crime

About 85% of all stolen cars are found. But they may be wrecked or stripped. The normal loss per stolen car is more than $200.

A car may be found right away. But that won't make up for all the trouble and the headaches and cost that you will face.

Keep your car as safe as you can. Do these things:

1. Don't leave your key in the car. Don't even hide it in the car. Thieves can guess these places.
2. Roll up the windows. Lock the doors when you leave. This makes it harder to get into. It also makes it less inviting.
3. Use your garage if you have one.
4. Park on well-traveled and well-lighted streets.
5. Don't leave things of value in your car. Luggage, radios,

or golf clubs are tempting. Keep these things in your trunk. In a station wagon, cover them with a blanket.

These steps can help. They won't always stop a theft. But they could slow the thief down. Time is a big factor to a thief.

Questions:

1. What kind of a case does the article make for locking your car?
2. Why do young people steal cars?
3. If you owned a parking lot, what steps not discussed in the article could you take to prevent car theft?
4. Which would be fairer to the victim of a car theft, a replacement or cash settlement?
5. What accounts for the high recovery rate of stolen automobiles?
6. What would be a good title for this selection?

The questions 1 and 4 are examples of implication responses as the student must sift through several ideas to support conclusions. Numbers 2 and 5 are factual, merely giving back information stated in the article. The third question involves applying the information in some new and different context. Number 6 is a quantitative question. The boundaries of these questions are similar and can be easily modified. It is not necessary to burden students with discrete identifications. The process of systematically diversifying the questions is the crucial objective.

4. *Reading rates*

The rate at which one can apprehend meaning from printed symbols becomes a reading problem when students are expected to understand curriculum materials for which their reading skills, habits, and abilities are inadequate. The intermediate grades are probably the first level at which a concern for rate of reading is justified, since at this point emphasis is placed on content reading. There is no set reading rate; a facile reader will develop several rates for reading different types of subject matter. A magazine article may be read at 500 words per minute while the same reader may have to spend several minutes in reading a math problem stated in forty words.*

*Many teachers express concern about lip reading. It probably is not wise to make students conscious of the practice as it spontaneously disappears as students gain proficiency in reading.

The problem of improving reading rate can be overemphasized unless one keeps in mind that rate is influenced by the reader's skills, habits, and attitudes toward the material being read. It would be useless to attempt to improve rate without dealing with those factors which are the basis for slow reading. Word-by-word reading is usually related to inadequate word recognition skills, excessive guessing, omissions, and substituting of words.

It is usually a good practice to begin training with materials at the student's independent level. Brief systematic practice for reading at different rates may be incorporated in your instructional program. The following activities may be used:

1. Provide a wide variety of materials (content areas, magazines, newspapers, etc.) to be read for different purposes. Stress that reading rate is contingent upon purposes.

2. Vocalization (lip movement) can be eliminated by providing a quantity of reading material that is very easy, extremely interesting, and not important for recall.

3. Initially, there should be little emphasis upon comprehension checks. It is usually sufficient to merely ask the student to relate in his own words what the story is about.

4. An effective and much used technique for increasing speed of reading is to work against time. Early exercises should be about 350 to 400 words in length. One or two exercises per session will provide enough pressure for this kind of work.

5. The major goal is to develop flexibility in reading rates. Opportunities for guidance in adjusting speed of reading to kinds of materials should be abundant in your classes. Preparation for each lesson should include discussion of the proper reading rate.

VI. Specialized Reading Skills

During the initial reading period, older students were exposed to materials that were either a direct consequence of their experience or written in relatively simple narrative style. At the intermediate and secondary levels, however, students are required to do much independent specialized reading. This is particularly true of out-of-school pupils whose occupational pursuits may include the use of technical materials, sequencing operational steps, or just daily coping skills. The reading program at Stage II must now include systematic teaching of the following work-study skills:

A. Obtaining information

B. Evaluating data

C. Organizing and summarizing

D. Retaining what s read

E. Utilizing and interpreting special aids

F. Reading in the technical and subject fields

Many instances of reading difficulty among adolescent and adult students exist because of inadequate training in study-area reading. Even the most successful readers are often not completely free from ineffectual practices. Directed training in study techniques benefits all students and is usually reflected in improved performance and increased motivation. The most practical and effective training is that drawn from tl.e adult's current study or related work materials.

A. *Obtaining Information*

The ability to locate and utilize sources of information is not only important for independent learning but a vital daily survival skill. Pupils are constantly confronted with situations that require the functional use of information including where to find the best buy on a boat, specific aspects of child care, automotive maintenance techniques, vacation guides, and perhaps even the men's department in a large store. A prerequisite skill involves the alphabetical arrangment of data. Specific instances include:

1. Mechanical aids, such as ability to alphabetize by first, sec-

ond, and third letters, rapidly seeking pertinent information by skimming, ascertaining the meaning of punctuation, cross references, headings and other typographical aids.

2. Knowledge of location, intent, and contents of different parts of reference material including table of contents (subdivisions), index, glossary, and special aids.

3. Ability to use library classification systems, the card catalogue, and the location of major reference materials and fiction.

4. Understanding and use of major reference tools such as the *Reader's Guide*, encyclopedias, atlases, dictionaries, and periodicals, consumer reports, handyman guides, do it yourself books, appliance manuals, etc.

In teaching locational skills, students need direct practice in searching for specific information. One of the most valuable tools for teaching beginning reference skills is a functional tool such as the telephone directory. It has several advantages over conventional instructional exercises, the most salient of which is that it provides a range of practice from the simple but interesting task of having students locate their friends' names to more complicated skills such as:

1. How many pediatricians are there in Portland?
2. Where might one go to buy skis?
3. List the pages where information is given on the following: department stores, lumber yards, doctors, etc.
4. If a man were unemployed, what agencies could help him?

Another interesting and readily accessible reading reference tool is the newspaper. Students can respond to the purposes of various sections, where to find certain types of facts, general characteristics of newspapers, and how to read the newspaper. Newspaper and magazine reading forms the bulk of the reading diet of our adult out-of-school population. Other useful materials to develop locational skills include cookbooks, medical guides, drivers' manuals, train and bus schedules and dining guides.

Library skills constitute the most significant and comprehensive utilization of locational skills. The activities include an understanding of the Dewey Classification System, the Library of Congress System, the arrangement differences between fiction and nonfiction, the card catalogue, the various indexes, periodical guides, and sources of factual and biographical data. The most realistic approach for teaching library skills involves actual use of library facilities, under teacher guidance, in solving study tasks. Cooperative ventures with content-areas such as employing research techniques, organizing a paper, developing a bibliography, outlining,

and notetaking are functional uses of the library. One reason that mothers give for an interest in the library is locating children's books.

B. *Evalating Data*

Critical thinking requires well-developed skills of analysis and interpretation. Effective critical reading involves an interaction between the reader and the author. The teaching goal is to encourage students to check the truth, logic, reliability, and accuracy of what is written.

One problem in teaching critical reading to pupils is the unwillingness of the students to make objective perceptive judgments. For example, naive or inexperienced readers often consider printed symbols as sacred objects that cannot be disputed. This attitude toward the printed word reflects a lack of experience of the reader with conflicting viewpoints on common topics. Deficiencies in informational or reading backgrounds can be at least partially compensated for in the selection of materials. The major competencies include:

1. *Selecting suitable sources of information*

The most fundamental step in critical reading involves the search for and evaluation of various sources of information. Students must suspend judgment and maintain a questioning attitude about the author, his statement of the problem, his defense, and the validity of his conclusions. Adult education classes abound with opportunities to consider current issues presented in different publications representing special interests.

2. *Distinguishing between relevant and irrelevant statements*

The reader must compare his own standards of thinking with those of the author if he is to arrive at an objective judgment. Students can develop the ability to view critically the author's evidence by comparing factual statements and editorial writing. Another technique is to have students identify the types of writing that are more likely to contain facts rather than personal opinion, or that include some propaganda device.

3. *Propaganda techniques*

At an advanced level of thinking, students learn to recognize devices that authors frequently use to sway opinion. We can do much to enable students to recognize glittering generalities, citation

of an authority or testimonial, bandwagon calls (everybody is doing it), and namecalling.

Some activities you can use to guide students in evaluating materials include the following:

1. Compare news stories with editorials to illustrate the difference between fact and fiction.
2. Read fiction and non-fiction books about a particular personality or event.
3. Compare advertising and consumer studies on the following products: cigarettes, vitamins, health foods, specific patent medicines, etc.
4. Expose students to dependable helpful sources of information, e.g., consumer guides, legal agencies, community health services, etc.
5. Use examples of "trash mail" to show misleading statements and claims. Discuss contests, chain letters, book and record clubs, etc.

Our efforts to make students more critical readers can be subsumed into the following major instructional goals:

a. All materials must be approached in a questioning way.
b. Previous experiences and learning must be actively associated with the author's ideas.
c. Judgment is suspended until the reader has completed his analysis.
d. Critical reading is a slow, thoughtful process.

C. *Organizing and Summarizing*

This section should be labeled "arranging and utilizing information." Perhaps the most important distinction between successful and poor students is the ability of the former to perceive the organization of what he reads. There are numerous activities we can use to help adult students to organize, including: outlining, summarizing, note-taking, following directions, and skimming.

1. *Outlining*

Before students can be expected to make progress with outlining techniques they must be able to detect the author's organization. Older students should have much practice with the four most common organization patterns: chronological order (time-sequence), simple listing, comparison-contrast, and cause-effect. Time-sequence enunciates the events as they unfold in chronological order and is the easiest type of material to outline. Comparison-contrast relates two or more ideas, for example, how certain plants are alike.

Cause-effect relationships are found frequently in the social sciences, such as the causes and effects of the major military campaigns. Examples of these organizational styles follow:

Chronological Order:

When I go to the movies, I like to first make sure I get there for the start of the movie. Then I like to get a big box of popcorn and go in and sit down in the middle of the theater.

Simple Listing:

When I go to the movies I like to sit near the center of the theater, eat a big box of popcorn, and be sure I'm there for the start of the movie.

Comparison-Contrast:

When I go to the movies I like to sit in the middle of the theater much more than in the very front.

Cause-Effect:

Since I make sure that I get to the movies on time, have a large bag of popcorn, and sit in the middle of the theater, I can come away thinking I really enjoyed myself.

Quite often instructional materials for adult basic education include a number of exercises for outlining. However, little attention is usually given to patterns of organization. You should select supplementary materials that incorporate this important practice since organizing requires a high level of integrative ability.

Initial practice in outlining should be limited to a single section or paragraph so that the procedure is clearly apparent. Exercises should be functional and for the purpose of coping with difficult material. A good way to start is to use a partial outline such as the following:

A Taxi Driver's Average Day

I. Morning
   A. *Arrive at work and pick up cab*
      1. Clean cab
         a. Dust seats
         b. Dump ashtrays
         c. _____
      2. Check to be sure cab phone is working properly

B. *Answer first call of the day*

1. _____
2. _____
3. Discharge passenger
4. Collect fee

C. *Answers other calls*

II. Lunch Hour

III. _____

A. *Answer calls during afternoon*

B. *Recordkeeping*

1. Make out record of all calls answered
2. Turn it in to dispatcher

C. _____

D. *Return home*

The following excerpt from a service station operator's manual is written in sequence and is an excellent example of a functional exercise in selecting key details:

Petroleum marketing is a large-scale operation. The wholesale distribution of petroleum products is handled for the most part by more than 14,000 jobber concerns. These are the companies that operate many of the 35,000 bulk plants and terminals in this country. Their job is to fill the bulk orders for petroleum products from service stations, commercial consumers, public utilities, transportation companies, factories, and rural farm accounts.

You can use the following related activities in conjunction with organizing and outlining practice:

a. Ask students to decide on a main topic for a selection in which the central idea is subsumed in the organization.
b. Discuss the use of the title, section, and paragraph headings as clues in finding the main ideas.
c. Make up new titles or section headings for the material.
d. Skim a story and review the main action in each part. Help students formulate a summary sentence on the board. Have

students reread the sentences, then erase them and tell the story from memory.

e. Practice writing headlines for reading selections, or actual news stories.
f. Distribute a series of paragraphs, each followed by several possible headings, one of them correct, one too inclusive, and one or two which are misleading or contain misstated facts. Select the correct heading and give reasons for their choice.
g. Distribute an outline of three or four main ideas. Discuss and attempt to agree on the details necessary to complete the outline.
h. Provide utilitarian opportunities for organizing and summarizing, such as writing an outline for a P.T.A. speech, sketching the major points to sell a particular product, and summarizing a public service message for a telecast.

2. *Summarizing*

One of our major goals is to ensure that students realize that summaries in their own words result in better learning. Summarizing information is a very difficult skill for most students. However, when it is mastered it helps the student to preserve essential facts and main topics in capsule form. Students at all stages of reading programs need continuous directed practice in writing summaries. Like the other organizational skills, writing a summary requires the student to detect organizational patterns, note main ideas and details, and classify data. Several exercises can be used to promote the ability to summarize:

a. Practice organizational skills such as outlining discussed in preceding sections.
b. Select the best summary for a paragraph or selection.
c. Write telegrams, suitable for transmission in 25 to 40 words.
d. Prepare headlines for news stories.
e. Write short summaries of a motion picture, a short story, or a news article.

3. *Note-taking*

The research on effective instructional techniques for developing note-taking skill is inconclusive. If we judge by student practices, note-taking is a highly individualistic practice which may reflect creative impulses as much as comprehension and organization of study materials. The following procedures can be used to help students to become more facile in taking notes:

a. Taking notes after a lecture, or following a tape recorded discussion of a topic.
b. Summarizing the most essential points of a paragraph.
c. Making personal comments or reactions to notes.
d. Taking notes on main topics while reading, to be filled in later.
e. Practice in varying the level of detail needed.

4. *Following directions*

The important skill of following directions can be developed in a functional context using materials that the adult contacts in everyday living. Exercises such as assembling objects, operating appliances, and running a piece of machinery are all appropriate and practical applications of this skill.

a. Encourage students to bring in directions for: cooking, assembling gadgets, mixing starch, etc. Discuss the need for accuracy in following directions.
b. Have students present the rules for playing various party games to the rest of the class. Then play the games.

5. *Skimming*

Skimming for details or to get the general impression of a selection is a valuable reading skill and is often confused with speed reading. There is little scientific evidence concerning the best skimming technique. Techniques vary with the individual reader and are largely acquired without formal training on the basis of need. Generally, there are two types of skimming: (1) to find definite items of detail in context, and (2) to get a general impression or overview of the selection. There are a number of functional activities that you can use with pupils to develop this skill:

a. Prepare a set of questions based on specific items of detail from an article. Have students skim the material rapidly, find the answers, and write them down. Oral discussion and reading may follow the exercise. Use reading and study materials incorporating the pupils' daily activities.
b. Ask students to look through several books or magazines to determine whether they would like to read the material or whether it offers information on a needed topic.
c. Use reprints from *Consumer Reports* such as, "How Well Do Tranquilizers Work?", "Hearing Aids," and "Showdown in Marlboro Country." Ask students to skim the materials and relate several major facts.

D. *Retaining What Is Read*

Basic education teachers often complain that their students need directed guidance in dealing with content area material. Robinson [11] proposed a method of integrative reading that requires five steps: survey, question, read, recite, and review (SQ3R). Other writers have modified the approach to include a sixth step—react.

Teaching students to use this approach with actual study materials can have a significant payoff. One difficulty in presenting the SQ3R is that teachers often *tell* their students how to use the SQ3R rather than showing them. You should present the technique over 4 or 5 class periods, calling attention to various components as part of systematic instruction in the content areas. Remind students to utilize the technique before giving an assignment in the content fields.

Steps in Textbook Study [11]

Step 1

Survey Look through the whole assignment. Read the headings and try to get the general idea of the content of the whole lesson. Later you can piece the details into the framework which you have in mind and the whole lesson will mean more to you.

Step 2

Question Think of the questions which are likely to be answered in the lesson. Often the heading can very easily be turned into questions. Use them! If any heading does not tell you plainly what to question, ask, "What does the author expect me to learn about this topic from studying this section?" If there are no paragraph headings, skim the section quickly for the main ideas.

Step 3

Read Study the lesson to find the answers to the questions. Concentrate on finding the main points. You cannot remember all the facts you find, so you must look for the most important facts. *Don't pick out too many.* Do not try to memorize the facts at this point, just sort out the ones you need as you go along.

Study Guide. Fold or rule a sheet of large-sized notebook paper lengthwise, down the middle. On the left, list the topics or the main points discussed in the book. If there are paragraphs with boldfaced headings,

use them. If not, list the main ideas found in the preliminary survey. Leave space between topics.

Step 4

Recite Go back to the lesson immediately. Cover the right hand side of your paper and check the headings on the left. Ask yourself, "Do I remember what this section is about?" or "Can I answer this question?" If you find that you can't, you know you must look at the details or even go back to the book which you did not understand or have forgotten. Step 4 is very important. Giving yourself an immediate quiz on what you have just studied is the best possible way to prevent forgetting. Practice until you can recite on the whole study guide. Then practice some more.

Step 5

Review Some time later, and also before an examination, go back to your headings and question again and quiz yourself. Read only those parts which you have forgotten. If you have taken steps 1, 2, 3, and 4 faithfully you will find that you do not have too much to restudy. What is important about the material? What problems are raised? What solutions are offered? Who is important to remember?

E. *Utilizing Special Study Aids*

One of the big problems we have in adult basic education classes is to help students use maps, illustrations, pictures, and graphs to increase their comprehension of study materials. Research indicates that effective use of these aids results in significant comprehension gains. There is a wealth of functional material from the adult world that can be utilized in developing facility with special information aids. For example, newspapers, magazines, occupational journals, and daily coping activities contain many graphic aids that are usually interesting and meaningful to adult students.

1. *Map reading* can be taught by integrating several skills simultaneously, including: attention to the title, legend, direction, scales, and relation to other geographic areas. Figure 1 can be used in conjunction with more detailed maps to introduce areas of the Vietnam situation. Once the pupil's interest and need are aroused, provide a more exacting examination of the area by drawing upon atlases, showing legends, land masses, routes, elevation and slope, as well as economic considerations.

FIGURE 1

The following functional activities can be used with older students to promote an awareness of map skills:

a. Look through gardening magazines. They abound with maps showing the migration of various insects.
b. Plan a trip with roadmaps considering the best route, distance, most scenic areas, availability of facilities, and need for special equipment, clothing, etc.
c. Request flight maps from airline companies. They are particularly valuable for stressing topographical features.

2. Occupational materials can be used to provide practice in reading the *four common graphs*: circle, line, bar, and pictorial. The major skills include: understanding the title, an awareness of what is being compared, and the ability to interpret the horizontal and vertical axes. Figure 2 provides a graphic summary of federal income and expenses. This exercise could include attention to various percentages in terms of revenue sources and categories of expenses.

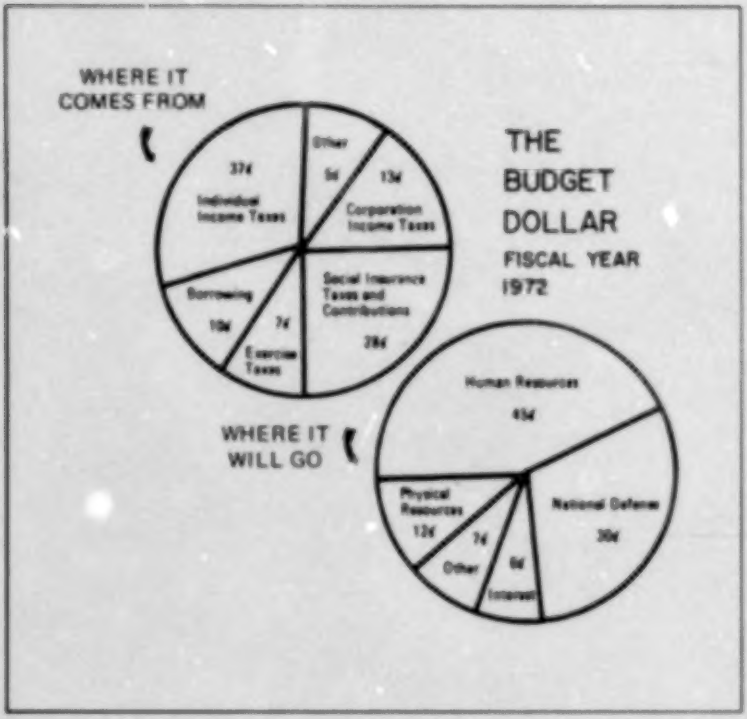

FIGURE 2

Sports related publications such as the *Commercial Fisheries Review* and *Outdoor Life* provide many examples of applications of the common graphs. Comparison graphs can be used to abstract such practical and interesting information as the best fishing areas, incidence of certain kinds of fish, and the growth of fishing landings during various periods.

Figure 3 offers an opportunity to call attention to the legend (scale of measurement), to make comparisons on the basis of projections, and draw conclusions in terms of probable outcomes. Pictorial graphs can frequently be found in vocational and technical publications.

Figure 4 clearly illustrates an effective use of the bar graph. It compares quantities, expresses amounts, and invites economic comparisons among different periods. Point out that a bar graph can be either vertical or horizontal.

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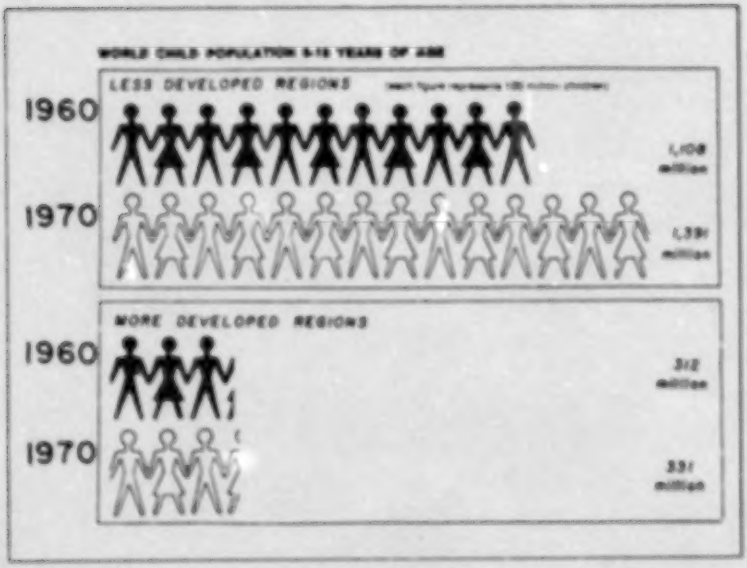

FIGURE 3

FIGURE 4

3. Interpreting *political cartoons and illustrations* requires considerable inferential ability. Directed practice should be included systematically as a part of social studies and current events. Figure 5 presents an interesting depiction of the 1974 congressional campaign. This illustration could be used to develop concepts as part of the preparation for the reading assignment. Students frequently ignore these important aids because of a lack of directed practice.

FIGURE 5

The effective use of illustrations for information can be demonstrated by such activities as having the men sketch a diagram on how to convert a van to a camper, charting the steps for peeling panfish, or asking the women to draw a step-by-step plan for mending clothing.

F. *Reading in the Technical and Subject Fields*

Reading in the content areas cannot be adequately treated in a guide of this nature. Helping students to be successful in the subject areas involves more than enumerating a list of "skills" for each course and providing isolated and direct practice. Herber's excellent discussion of study area reading has already been cited.[24] He contrasts the definite difference between teaching reading in a reading class and a subject-oriented class as follows:

> The reading teacher's curriculum is a set of reading skills. Certainly he hopes to develop students' interests in the use of these skills to enlarge their interest, appreciation, and understanding of life around them, but his primary responsibility is to teach the skills. He arranges the skills in logical sequence. The content areas teacher finds materials which contain information and ideas he wants his students to encounter, understand, and use. He is not primarily concerned with the skills students must use in reading material. When he teaches the students *how* to acquire the information from assigned selections, he has to be aware of the skills inherent in that selection.

Reading competencies do not automatically transfer from one subject area to another. We can best approach study reading by identifying those reading behaviors that are most essential in the various subject areas and provide guidance in their application. For example, the four most common types of writing organization are simple listing, time-sequence, comparison, and cause-effect. If your objective in teaching American history is to have students understand the Civil War and its consequence on Reconstruction, you may be assured that reading will involve cause-effect relationships. A legitimate goal of content area teaching is to give students practice with the skills necessary for attaining discussed instructional objectives. Herber [24] discusses a number of teaching examples for helping students acquire independence.

You can significantly increase the effectiveness of your content area instruction by modifying the components of the directed-reading-activity discussed in Chapter VII. Too often, preparation for reading an assignment involves, "Read pages 89-95 for the next class." Of particular concern in the subject fields is adequate conceptual background for understanding the material. Techniques for vocabulary development should be integrated with content area teaching.

Recommended practices for content area reading include:

1. Matching the text material with the student's reading instructional level.
2. Presenting the textbook, its organization, review of table of contents, glossary, study aids and index.
3. Periodic review of the basic reading skills necessary for success in the particular content area (see preceding Chapter).
4. Direct and systematic teaching of concepts, special vocabulary and technical terms.
5. Introduction of and practice with appropriate reference materials.
6. Provision of differentiated assignments and intra-class grouping to accommodate variability in reading and achievement.
7. Making available an abundance of related informational books, written at different levels.

Many teachers have found it helpful to specify the outcomes of their lessons with behavioral objectives. Objectives are precise descriptions of the performance that the instruction is to produce, stated in terms of what the student is able to do. A behavioral objective can be easily measured and includes three specific operations: (1) specific content, (2) student involvement, and (3) measurement. Note these three elements in the following objective:

(1)	(2)	(3)
the three major causes of the air pollution	by discussing power generation, automobile fumes, and industrial wastes	so that students will be able to accurately match each action to a specific consequence

Once you have specified your objective, you are ready to consider the requirements necessary for attainment of the objective. The first part of the lesson involves *preparation*. We can stimulate interest and *motivation* by relating the assignment to the pupil's experience and background. What are the *major concepts* that the student must appreciate before reading? Chapter V includes a number of direct and vicarious activities that can be used to foster understanding of abstract ideas. The next step involves *establishing purposes*—"I'm searching for specific information." The survey and question steps of SQ3R will help to establish this mental set. Finally, what skills are necessary for successful reading of the assignment (an awareness of organizational patterns, drawing inferences, critical reading, etc.)? The comprehension exercises discussed in the preceding chapter can be used for follow-up and reinforcement.

Most state departments of education have prepared comprehensive curriculum guides for adult basic education and secondary studies programs. Curriculum planning for pupils must include careful consideration of skills and knowledge that the adult needs in his present employment or to assist in obtaining employment. Areas that enhance or enrich the life of pupils should also be incorporated. The following are examples of appropriate content for pupils at the pre-secondary and high school levels:

Language arts

The context should contain only the most essential communication skills that enable pupils to more adequately cope with the world in which they live and work.

1. *Reading:* Using newspapers and magazines; interpreting legal documents; analyzing political arguments; critically evaluating advertising; developing vocabulary and comprehension skills; and reading for different purposes.

2. *Communication:* Using everyday language; using dialogues built around one or more grammatical structures; initiating sentence patterns; practicing stress and intonation; reviewing functional English grammar; working on oral introduction; speaking in extemporaneous monologues and the reading of short poems and plays; and studying the style of news commentators.

3. *Writing:* Friendly, business and social notes, letter of application; autobiographies or biographies of a friend; description (imagery); using adjectives; writing reports; and studying the style in adult publications.

4. *Literature:* Literature and periodicals; studying of authors; style; basic, intermediate, and advanced poetry; humor; short stories; novels; drama (one and two acts); parodies; and tragedies.

Language arts teachers must consider some of the following reading competencies:

1. Facility in reading different materials for various purposes.
2. Critical and creative reading of literary works.
3. Development, expansion and refinement of concepts.
4. Awareness of characters, settings and plots.
5. Understanding the author's mood, intent and purpose.
6. Vocabulary development including context clues and structural analysis.
7. Interpretation of poetry.

U.S. History topics should be flexible and presented according to interest, ability and motivational level of students. It is impossible and undesirable to cover all aspects of American History in a basic education class. Emphasis should be on presenting concepts rather than facts or personalities and dates. Moran [27] suggests a five level curriculum:

1. Familiarity with a time base.
2. Practice in associating an important event with the time line.
3. Study of famous American documents including Mayflower Compact, Constitution, Declaration of Independence, Bill of Rights, and the Monroe Doctrine.
4. Associating the function of the three major branches of government.
5. Current issues.

Math and science courses should afford functional application of the context in the pupil's daily life. Science in particular should involve issues relating to pollution, drugs, smoking, alcohol, aging, diseases and sex education. Reading in science and mathematics, like language arts and social studies, involves unique abilities including:

1. Dealing with precise terminology, few of which are part of the listening and speaking vocabularies.
2. Employing the scientific method (induction-deduction reasoning).
3. Acquiring an understanding of many symbols.
4. Following specific directions.

Social studies commonly includes history, geography, economics and psychology. Successful reading of these subjects requires a number of special reading capabilities including:

1. Concept density, terms such as "justice", "democracy", "culture", etc.
2. Using and interpreting special aids, maps, graphs and charts.
3. Perceiving the organization of material, especially cause, effect and sequence relationships.
4. Critically evaluating what is read.
5. Using primary and secondary sources.

Teaching in the content areas must proceed on a double agenda:

1. Identifying and analyzing the critical competencies necessary for understanding the content.

2. Systematic teaching of these tasks. Each subject has its own vocabulary and concepts, special reading requirements, and particular organizational characteristics. The following general guidelines would be helpful in any area:

   a. Providing the basis for concept attainment with the material to be read.
   b. Offering wide, varied reading of related materials at different reading levels.
   c. Planning practice in reading different selections for different kinds of purposes.
   d. Giving specific training in the skills necessary for achieving content objectives.

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VII. Classroom Management

The purpose of this chapter is to translate the diagnostic and prescriptive techniques discussed throughout the text into a coherent plan of instruction. The process that we will employ is that of individualized reading. The concept of individualized instruction was first advocated by Olson.[38] It encompassed three premises: self-seeking, self-selection and self-pacing. This approach provides a climate of guidance, understanding and encouragement, together with the appropriate and necessary materials for an optimum learning situation. Each student progresses at a rate that is uniquely appropriate for his background.

A program of individualized reading is particularly suited to the needs of the untaught. It is intrinsically motivating because pupils are permitted to make their own reading choices. This plan of organization combines all the communication skills of listening, speaking, reading and writing. Students are encouraged to carry their reading into some form of self-choice summarizing activity. Class members are not labeled according to a reading level or progress in a particular reading series. They may, as the need is indicated, work individually, in twos, or in various size groups. The group work is terminal, based upon specific, immediate and common needs.

Mrs. Marjorie Knight, a reading consultant in the Portland schools, shared with the writer some of her experiences with reluctant secondary school students:

> Ricky was 14 years old when he entered my individualized reading class. He had an extreme distaste for reading and was determined that he couldn't and wouldn't make book choices. After several weeks he gradually got involved in projects. He started writing plays—and that did it! During the five week period he set a goal to read 5 books. He finished 11.
>
> Another boy had a complex about being physically small. The first book he read was about the "Littles", a mouse family. Later, during a conference with me he explained, "If they can do it, so can I."

A. *Individualized Instruction*

The first step in organizing for individualization involves acquir-

ing, and familiarizing yourself with, a variety of reading materials. In many instances, you will have to create materials as well as encourage your pupils to do so. Companies such as *Scholastic* have published comprehensive classroom libraries. Regardless of the ages of those in the program, two things must be considered in selecting reading fare: (1) the range of reading levels represented within the class; and (2) the reading interests of the group.

Exercises for skill development should evolve from actual reading situations and materials. Many teachers have found it helpful to assemble "reading skill kits," consisting of many different worksheets and dittos, sequenced according to the various stages of reading progress. This process must be selective and based upon reliable criteria since many reading workbooks contain activities that are superficial, and have limited transfer to the process of reading. In addition, many students with reading problems have had a saturated diet of workbook material. Workbook exercises should be "redesigned" into "teacher-made" materials more appropriate and personalized for students.

Attention to basic reading skills can most effectively be accomplished by using each pupil's own vocabulary notebook or word box. Always begin by using words that the student has mastered at sight. For example, if a problem in using visual clues to speculate on long and short vowel sounds is detected, several known words ending with the final "e" can be printed on a card and pronounced by the student. The final "e" is then dropped, giving the pupil functional practice in discerning differences between long and short vowel sounds. Similarly, other exercises could be generated dealing with related phonic and structural variants.

Independent Activities

The key to a successful individualized reading program lies in the organization of the classroom. Veatch and her colleagues have provided an excellent review of interest centers that can be readily adopted in most self-contained classrooms.[50] Teaching the untaught, in many instances, involves instructional settings consisting of small groups and individualized tutorial work. Interest areas provide opportunities for structuring independent activities that may be teacher-pupil planned or initiated by students intuitively. They are used by the students as the teacher is working with individuals. The creation of centers is not dependent upon elaborate resources, but on the teachers' ability to innovate. The following centers can be used with older students and in adult basic education classes with a minimum of teacher supervision:

Library Center

Essential to the success of an individualized reading program is the availability of a variety of reading matter. This should include group dictated books, typed and illustrated; expository prose; reference materials, representing many publishers and reader levels; well-selected narrative books; magazines for different age levels; and newspapers and informational brochures.

Writing Center

This center should be located in a quiet area and may be divided by refrigerator or other large appliance cartons. It should contain a supply of paper, pencils, and typewriters. Even students in the initial reading level can use their word boxes or vocabulary notebooks to write. Students with good sight vocabularies can be designed as word helpers. The writing center provides realistic opportunities for teaching spelling. One of the writer's graduate students successfully enlisted several severely reading disabled high school pupils in the writing and illustrating of books for elementary children.

Math and Science Center

This area should contain manipulative materials, objects, measuring devices, microscopes, plants and other observational things. Activities for older pupils and adults should include pragmatic applications of experiments to immediate concerns and experiences. This emphasis on inquiry and discovery is educative in the highest sense of the term.

Communications Center

This part of the room provides an opportunity for groups of students to meet and confer. Spontaneous sharing of experiences, developing ideas for projects and meaningful audience-centered oral reading can be promoted. Recalcitrant pupils can be encouraged to take part in conversations in an informal and relaxed atmosphere.

Audio Visual Center

Particularly with older students, the media center abounds with opportunities for language utilization. Segments of stories, rich in sensory imagery, can be recorded to encourage writing and art related activities. This technique is used frequently at the Reading Clinic to draw out non-verbal students. Teacher recorded skill

exercises afford many situations for self-directed activities. The center should also be stocked with filmstrips, record players, earphones and read-along records.

Project Center

Students need a place where they can congregate and do something collectively and individually with the books they have read. Ideas for projects are limited only by the teacher's imagination and the student's initiative. Suggested activities may take the following forms:

1. Making captions for illustrations and cartoons.
2. Designing a bulletin board related to a theme or topic which different students have read about. (This may also include special vocabulary.)
3. Preparing book jackets, including a discussion of ideal qualities for book jackets.
4. Generating criteria for selecting outstanding books, including a selection-of-the-week.
5. Compiling illustrations or pictures that amplify words such as "England," "work," "happiness," etc.

There are literally hundreds of project activities that can be evolved. Two excellent sources for ideas already cited are the *Scholastic Classroom Libraries* and Veatch's book, *Key Words to Reading: The Language Experience Approach Begins*. Many teachers find it helpful to start their own collection of activities by borrowing ideas from their pupils. Students should always be allowed options when selecting their projects.

The Conference

The individual reading conference is the core of the program. It provides the student with an opportunity to meet personally with the teacher and discuss what he has read and accomplished. The conferences usually range from 10 to 12 minutes in time and are held in developmental reading, two or three times a week. Working with the untaught, however, requires a significant departure from these recommendations. Most students will need brief, daily conferences, including a time to plan follow-up work. In some instances, the teacher may conduct a conference simultaneously with two or three students who have read the same book.

The conference consists of four parts:

1. Comprehension check

2. Audience centered oral reading
3. Attention to difficult words
4. Suggestions for follow-up activities

1. *Comprehension check.* Hunt points out that the success or failure of the conference is a function of the teacher's ability in the art of questioning.[27] Undoubtedly, the worst question that teachers can ask is, "Tell me about your book." The best questioning is that which enables the student to bring experiences from his own background into his reaction to the book. Hunt suggests three major themes to promote personal involvement:

1. Appropriateness:
   (a) Why did you choose this book?
   (b) Was it a good story? Why?
   (c) Were there places you didn't understand?
2. Appreciation:
   (a) Was this an interesting book?
   (b) Do you usually like books of this type?
   (c) Would you like to share your book?
3. Values:
   (a) What new ideas did you learn from the book?
   (b) Did something happen that you wanted to happen?
   (c) What part of the story was most important to you?

The following is a transcript of a conference conducted with a 7th grade student who entered the Reading Clinic with an extremely negative attitude toward reading:

The Emperor's New Clothes—by Hans Christian Andersen

Teacher: Why did you choose this book?
Pupil: 'Cause I saw the movie and I thought I'd like to read about it.
Teacher: Did you enjoy the book as much as the movie?
Pupil: Yeah, I guess so.
Teacher: Why?
Pupil: Because it was about the same thing and it showed most of the stuff it showed in the movie.
Teacher: If you had to choose between the movie and the book, which would you choose?
Pupil: The movie, because in the book they didn't move around.
Teacher: Did you enjoy the art work in the book as well as in the movie?

Pupil: Sort of, the art work in the movie was movable, in the the book they just stand there.
Teacher: Which part of the book did you like best?
Pupil: When he walked into town naked.
Teacher: Why did you like that part best?
Pupil: It was the most funniest and embarrassing.
Teacher: Would you have liked to have been there in the story?
Pupil: Yeah, when the little kid jumped out and said he doesn't have any clothes on at all.

These excertps demonstrate how the teacher can encourage students to react to a story, by incorporating their own experiences.

2. *Oral Rereading*. The only appropriate reason for oral reading, aside from diagnosis, is to present information in an audience situation. Students should never follow along silently during an oral reading situation. During the conference the student is invited by the teacher to pick out a part of the selection he personally enjoyed and read it orally. The pupil can be guided in the application of appropriate oral reading skills, including expression, delivery and proper phrasing. He may elect to share part of his book with other members of the class.

3. *Reading Skills*. The student identifies troublesome words prior to the conference. An effective technique is to have pupils write the words in context. The student may then look up the word in the dictionary and determine which entry agrees with the word as used in context. A third follow-up is to have the student use the word meaningfully in a sentence of his own. A record may be kept of difficult words and the teacher may wish to discuss some of the words again at a later conference.

Throughout the implementation of the program, constant diagnosis and evaluation must take place on an individual basis to determine whether the objectives of the reading program are being realized. Direct teaching of needed skills can occur systematically. An analysis of individual problems provides the basis for the organization of small groups for specific improvement of reading skills. The teacher must keep a detailed record of each pupil's reading performance, including comprehension, the application of word recognition and vocabulary skills, oral reading and progress on related activities. Precise record keeping is essential and cannot be over emphasized. It is the basis for planning an on-going, successful program.

4. *Follow-up*. The conference concludes with suggestions for ad-

ditional reading, and a discussion of completed projects and activities for reinforcing reading skills. In addition to a daily reading record, pupils should be given copies of individual book record forms. These may vary in format, but most include the title and author, total number of pages read, difficult words encountered, activities related to the book and personal recommendations for classmates who may be planning to read the same book. There are a number of variations of student records; however, most teachers using individualized reading have pupils maintain a daily reading record similar to the following:

DAILY READING RECORD

NAME _____

AUTHOR _____

TITLE _____

FICTION OR NON-FICTION ____

DATE	PAGE STARTED	PAGE ENDED	VOCABULARY PROBLEMS	PAGE #

B. *Directed Reading Activities*

The reading lesson is called the "directed reading activity" and is developed with material that is at the student's insrtuctional level. The purpose of the directed reading activity is to help students achieve immediate success and ultimate independence by establishing purposes for reading and applying word recognition and vocabulary skills.

For an adult basic education group, the directed reading activity usually focuses on the reading of coping skills (life adjustment) material that has been rewritten beginning at the first reader level. A typical lesson might include an article entitled, "Fourteen Ways to Reduce the Cost of Your Next Automobile."

The reading lesson itself consists of five parts, which may be com-

pleted during one instructional session or over several days. The five steps include Preparation for Reading, Silent Reading, Comprehension Check, Oral Reading, and Follow-up. The steps are developed as follows:

A. *Preparation for Reading*

1. *Concept clarification.* Are there any concepts or ideas in the selection that are new to the student? Two avenues may be employed to enlarge the student's concept understanding: (1) varied and first hand experience, and (2) vicarious activities.

First hand experience involves direct contact with objects, people, situations, and the environment. To be instructive, the experience must have a sufficient degree of complexity, and opportunity must be provided for the adult to verbalize the encounter. Vicarious experience is provided by means of secondary media, such as pictures, charts, maps, models, slides, motion pictures, television, etc.

2. *Presentation of new words.* Assuming that students are reading materials at their reading instructional level, it is not necessary to isolate "new words" and teach them before reading. Rather, attention is given to appropriate word recognition skills that can be applied in the reading situation. For example, one way to derive the meaning of an unknown word in an article is by using a synonym context clue: that is, by substituting a synonym for the unknown word. For example, if the unknown word is *dram*, the synonyms *draft* or *drink* can be substituted in the sentence to help derive its meaning.*

3. *Setting the purposes for reading.* The degree of reading comprehension is directly contingent upon the purposes established prior to reading. The types of purposes students set before reading can limit or extend their breadth of understanding.

Our prime goal is to foster *independence* in establishing purposes for reading so that the students will read a selection with an "I'm looking for something" attitude. Encourage students to set purposes for reading by calling attention to illustrations, topics and subtopics. You might ask, "What do you think the author is going to say about ways to save when buying a new car?" Students should develop the habit of questioning and anticipating new ideas. To cultivate this habit, ask the students to jot down questions they may have about the topic of the selection. After awhile, this "mental set" will become automatic. Once these preparatory steps are completed, the actual reading of the text may begin.

*See the discussions of context clues beginning on pages 46 and 60-61.

B. *Silent Reading*. Direct the student to silently read the article. *Silent reading always precedes oral reading*. This enables the student to grasp the overall intent of the selection to facilitate comprehension of the context. While the student reads silently, the teacher should be available to assist with any difficulties or questions. Silent reading is the most crucial part of the reading lesson.

C. *Comprehension Check*. Following silent reading, the rule should be, "Honor thy purposes." Discuss the purposes established before reading. Were student assumptions correct? Further inquiry may be stimulated by raising questions that require interpretative and applied levels of thinking.**

D. *Oral Reading*. Instruction in oral reading must be viewed in light of the purposes for which it is used, the materials employed, and how it is incorporated in the reading program. There are two major purposes for reading orally: (1) to communicate something in an audience situation, and (2) for reading diagnosis.

There are several legitimate opportunities for oral reading: (1) to amplify responses to original purposes, (2) to verify a point, (3) to share a particularly enjoyable or interesting part of the selection, and (4) to entertain. A student, especially one that is a poor reader, should never be forced to read orally in front of a group.

Requiring older students to read aloud may be very threatening because many can remember being required to do so in front of their peers when they were in school. The embarrassment of not being able to read certain words can be an extremely humiliating experience.

E. *Follow-up*. A number of activities are possible following the reading lesson: extended reading with other sources, developing listening comprehension, specific skill work (prescribed on the basis of individual needs), concept development, comprehension work, study skills, etc.

Students should spend more than one-half of their class time in actual reading situations. Every effort should be made to encourage independent reading at home. Abundant supplies of paperbacks should be available in every classroom.

Summary

Directed Reading Activity

A. *Preparation for Reading*
   1. Concept clarification

**Techniques for comprehension development are discussed in Chapter 5.

2. Presentation of new words
3. Setting the purposes for reading

B. *Silent Reading*

C. *Comprehension Check*
1. Discuss purposes established before reading
2. Redefine purposes in view of discussion
3. Concept clarification and amplification

D. *Oral Reading*

E. *Follow-up*
1. Reinforce skill work in comprehension, vocabulary, and word recognition
2. Encourage independent reading
3. Suggest supplementary, related reading materials

C. *Some Notes on Selecting Materials*

A major concern of teachers of adult basic education is the selection and utilization of appropriate instructional materials. While a myriad of reading material exists, many programs are unsuitable for undereducated adults, because they fail to incorporate relevant interests of adults, are linguistically incompatible with many subcultures, and often place unwarranted emphasis on certain skills for teaching reading. Instructional materials for adult education classes must be evaluated within the scope of the complete program. Each stage of reading progress must be considered so that the sequential development of all the constituents of the reading process is assured. The following criteria can be used for assessing and selecting materials for pupils:

A. The *reading difficulty* (readability) of the material must correspond to the adult's instructional level. If the materials are to be read independently by the adult, they should be at least one level below the instructional level so that they can be read smoothly without guidance.

B. The materials must be compatible with the adult's *background and interests.* Several studies have shown that information on most subjects is highly related to socio-economic level, occupational status, and educational attainment. The values and life styles of minority groups should be represented.

C. The *writing style* must closely pertain to the adult's language system, particularly in the initial stages of reading. Adults want to learn quickly, and a simple, clear writing style will help them accomplish this goal. Even at the initial stages of reading, adults appreciate a mature approach in reading style.

D. The *format*, including typography (type size), illustrations and subheadings, must be designed to assure visual comfort as well as help the adult to grasp the organization of the material more quickly. Teachers of adults should consider the decrease in visual acuity with aging.

E. Instructional materials should provide a *balanced and sequential presentation* of each stage of the reading process. This would include emphasis on certain teaching tasks, provision for practice, and independent activity.

F. A significant aspect of material selection involves analysis of the *instructional manual* that accompanies the material. Teacher's manuals should include: (a) clearly stated program objectives; (b) supplementary aids for teaching basic skills; (c) an overview and rationale for the complete reading program; and (d) guidance in selecting supplementary materials such as library selections, audio-visual aids, and program references.[27]

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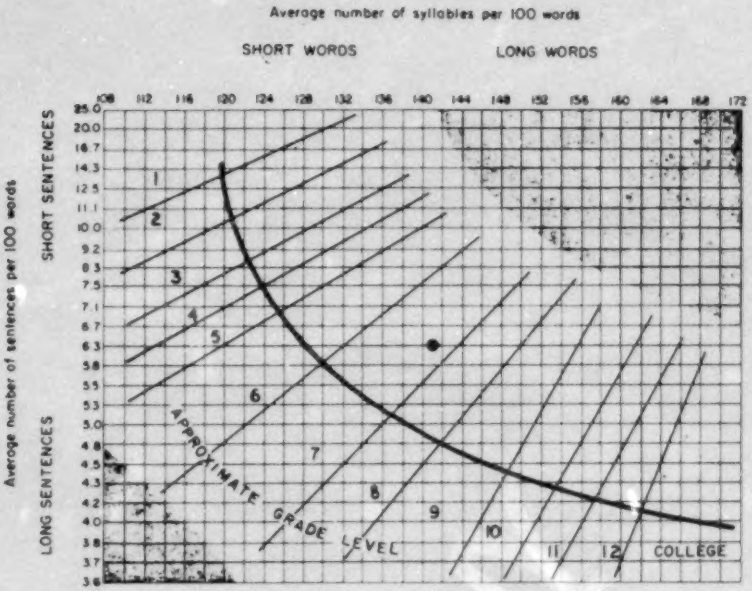
IX. Appendix A

FRY READABILITY FORMULA

GRAPH FOR ESTIMATING READABILITY

by Edward Fry, Rutgers University Reading Center
New Brunswick, New Jersey



DIRECTIONS: Randomly select three 100-word passages from a book or an article. Plot the average number of syllables and the average number of sentences per 100 words on the graph to determine the grade level of the material. Choose more passages per book if great variability is observed, and conclude that the book has uneven readability. Few books will fall in the gray area, but when they do, grade level scores are invalid.

		Syllables	*Sentences*
EXAMPLE:	1st Hundred Words	124	6.6
	2nd Hundred Words	141	5.5
	3rd Hundred Words	158	6.8
	AVERAGE	141	6.3

READABILITY 7TH GRADE (see dot plotted on graph)
For further information and validity data, see the April, 1968, *Journal of Reading* and the March, 1969, *Reading Teacher*.

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Appendix B

ADVANCED DIAGNOSTIC TESTS
INFORMAL READING INVENTORY

The Inventory consists of an oral and silent reading passage at each reader-level. Questions should be asked after one reading. The pupil should *not* have an opportunity *to* see the selection while answering the questions.

In determining reading levels, subjective criteria such as word recognition errors, poor phrasing, repetitions, etc. must be considered. Generally the following criteria should be used:

INDEPENDENT LEVEL: Reading level where a person needs no help. Objective measure—difficulty with no more than one word in a hundred (99%) and comprehension at least 90%. Subjective measure—oral reading fluent with no signs of difficulty; silent reading with no lip movement or vocalization, finger pointing or other signs of difficulty.

INSTRUCTIONAL LEVEL: Reading level where pupil should be taught. Objective measure: difficulty with no more than one word in twenty (95%) and comprehension at least 75%. Subjective measure: oral reading fluent with little signs of difficulty except for an occasional word; silent reading with no lip movement, vocalization, finger pointing or other signs of difficulty. (Note that difficulties at the instructional level are slight.)

FRUSTRATION LEVEL: Reading level where pupil exhibits various signs of difficulty. Objective measure: difficulty with more than one word in ten (90% or less) and comprehension 50% or less. Subjective measure: oral reading with pauses, word by word, voice high pitched or hardly audible, finger pointing, head movement, body movements, yawning, punctuation ignored and words omitted, added or repeated; silent reading with lip movement or audible whisper, finger pointing, head movement, body movements, yawning, slow reading or refusal to read (Note that all signs of reading difficulty do not have to be present at the same time.)

CAPACITY LEVEL: Highest level where pupil understands when

someone reads to him. Objective measure: comprehension at least 75% based on inferential questions as well as factual questions which are worded at the same level as the selection.

Initial Reading Oral Reading (1 error)**

Motivation: Read this paragraph to find out about the car.

Bill has a car.
It has red seats.
He likes to drive it.
It goes fast.

Comprehension check:

Ask the student to tell you about the selection. Word recognition errors are a more significant indication of readability.

First Reader Level Oral Reading (4 errors)

Motivation: Read this selection to find out how you can keep your dog healthy.

A dog means work. He needs more than food. His health is important. It may affect yours. Rabies is one case. This is a disease of the nerves. It is caused by a virus. All warm blooded creatures can pass it. The germ is in the saliva. It is spread by a bite. This can be fatal to man and animals. Your dog should have a rabies shot every two years.

1. What does caring for a dog mean? (work)
2. What part of the body does rabies affect? (the nerves)
3. How does rabies spread? (a bite)
4. How often should a dog have a rabies shot? (every two years)
*5. What does the word saliva mean?
*6. Can you think of some warm blooded creatures that may spread rabies?
*7. In what way is a rabies shot for animals like giving humans a polio shot?
*8. What facts in the selection support the need for giving dogs rabies shots?
*9. What would be a good name for this paragraph?
*10. Do you think the writer left out any other important information about rabies? If so, what?

*Accept reasonable inference.
**This number of word errors indicates 95% word recognition in context.

First Reader Level Silent Reading

Motivation: There are many reasons for dreaming. Read this selection to find out why people dream.

Dream study is twenty years old. The dreamer may take part in the action. Or, he may just watch. Sometimes they are in color. Most people dream all night. They are hard to remember. They make wishes come true. Dreams also help us sleep. The sound of an alarm clock may cause a dream of a bell. A supermarket trip may mean the dreamer is hungry. A nightmare doesn't meet any of these needs.

1. How many years have dreams been studied? (20)
2. What things may the dreamer do during a dream? (take part or watch)
3. How long do people usually dream? (all night)
4. What purposes do dreams serve? (make wishes come true, help us sleep)
*5. How would a daydream be different from a dream during sleep?
*6. What might happen if a horn blew while you were sleeping?
*7. What sort of a person would dream often about being in a market?
*8. What would be a good name for this paragraph?
*9. What facts given in the selection about dreams did you already know?
*10. How might a dream tell you something about yourself?

Second Reader Level Oral Reading (6 errors)

Motivation: Tornadoes cause much damage. Read this selection to find out how tornadoes strike.

The day is very humid. There may have been a thunder storm. Suddenly the sky becomes dark and strange. The air turns very still. Then you hear a loud roar. A black mass of air sweeps down from a cloud. A tornado is about to strike!

Tornadoes can do more damage than any other storm. They arise quickly and last only seconds. Winds can be more than 200 miles an hour. The path can be straight or winding. Some tornadoes stay on the ground. Others rise and fall. Damage can range from a few feet to 300 miles. No wonder they are called the "Devils' Madness."

---

*Accept reasonable inference.

1. What is the weather like before a tornado? (humid, cloudy, thunder storm)
2. When do you know a tornado is about to strike? (black mass of air appears)
3. How long does a tornado last? (only seconds)
4. How large an area can a tornado damage? (few feet to 300 miles)
*5. What does the term "devils' madness" mean in this selection?
*6. How are tornadoes and thunder storms different?
*7. Where do you think the safest place would be during a tornado? (under ground)
*8. What would be a good name for this selection?
*9. What time of the year are tornadoes most likely to happen? Why?
*10. Do you think the writer has left out any other information on tornadoes? Discuss.

Second Reader Level Silent Reading

Motivation: Motorcycle sales are on the rise. Read this selection to find out why.

There are good reasons for buying a motorcycle. In 1973 there were three million bikes on the road. Most of them were made in Japan. You can get a good bike for less than $500. They get fifty miles or more on a gallon of gas. It's a great feeling to ride in the wind.

You must know how to drive. This can stop accidents. The basic controls must be learned first. The feel of the clutch and throttle is important. Your hands and feet must work at the same time. Next you must learn to do stops and slides. A beginner needs much practice.

1. How many motorcycles were on the road in 1973? (3 million)
2. How much do you have to pay for a bike? ($500)
3. How many miles can you get on a gallon of gas? (50+)
4. What is the first thing you have to learn to ride a bike? (basic controls)
*5. Why would a motorcycle be good transportation during an "energy shortage"?
*6. Describe the steps in learning to ride a motorcycle.
*7. Pretend you are a salesman. Can you think of any other

*Accept reasonable inference.

good reasons not discussed in the selection for buying a motorcycle?

*8. What would be a good name for this selection?

*9. How does the statement "An ounce of prevention is worth a pound of cure" relate to this selection?

*10. Can you think of something you might add to this selection?

Third Reader Level Oral Reading (6 errors)

Motivation: Read this selection to find out about the history and use of our flag.

Countries use flags as labels. They use different designs and colors. Many have an interesting history. Betsy Ross is said to have sewn the first American flag. This claim cannot be proven. The first flag had thirteen red and white stripes with white stars. Even though there are more states, our flag has not changed much.

Most countries have passed laws about the use of flags. Insults to the flag may lead to punishment. Poor treatment of a flag may bring trouble between countries. Flags should only be used outdoors during good weather and during the day. Flags should be displayed on public buildings. They should never touch the ground.

1. What purpose do flags serve? (labels for countries)
2. Who made our first flag? (Betsy Ross)
3. How many stars did the first American flag have? (13)
4. Where should flags be displayed? (public buildings)

*5. Describe the first American flag.

*6. When we pledge allegiance to the flag, what are we really doing?

*7. What would be a good name for this selection?

*8. Why hasn't the American flag changed greatly through the years?

*9. Has the writer omitted any other rules for using flags?

*10. Is this selection based upon facts or just the writer's opinion? How do you know?

Third Reader Level Silent Reading (6 errors)

Motivation: Read this selection to find out the causes and uses of echoes.

An echo is a sound that bounces back. If you shout on a steep cliff, you can hear the sound bouncing back from the rocks. The

*Accept reasonable inference.

walls that send back the echo must be clear and hard. The sound will not return unless you are 30 feet away from the cliff. The louder the yell, the more bouncing. An echo is like a rubber sound ball.

Many animals find their way by listening for echoes. Bats and fish use echoes to catch their prey. Radar sends echoes to find objects under water and in the air. Pilots use radar to detect storms. Echoes guide planes to safe landings in bad weather.

1. How does the writer describe an echo? (sound that bounces back)
2. How far away from the cliff must you be to make an echo? (30 feet)
3. How do animals use echoes? (find their way, catch their prey)
4. How does man use echoes? (find objects, detect storms, flying)
*5. What does the word "prey" mean in this selection?
*6. Compare an echo with a rubber ball.
*7. Where would it be difficult outside to make an echo?
*8. What would be a good name for this selection?
*9. Did you enjoy reading this selection? Why?
*10. What are some other things that radar is used for that were not discussed by the writer?

Fourth Reader Level Oral Reading (7 errors)

Motivation: A license means many things to different people. Read this selection to find about the different kinds and uses of licenses.

A license gives the right to do something. There are many kinds of permits. They are granted by the government. A license may let a person carry on some form of trade. They also mean that people can do their work without harm to others. Doctors and lawyers must take state tests to get licenses.

Licenses are given for many reasons. All states have driver's licenses. They bring in money. In case of a crash the drivers can be found. They are used to control certain conditions. A marriage license means that two people are of age and have had a blood test. Hunting licenses control hunting seasons and guns. All licenses serve special purposes.

1. What does a license give? (a right)

*Accept reasonable inference.

2. Who grants licenses? (government)
3. Why are driver's licenses important to the state? (money, identify drivers)
4. What two things are required for a marriage license? (age and blood test)
*5. What does the word "trade" mean in this selection?
*6. Compare the kind of license a doctor must have with a hunting license.
*7. What reasons does the selection give for issuing licenses?
*8. What would be a good title for this selection?
*9. Can you think of any other licenses that were not discussed in the article?
*10. Was this selection based upon fact or the writer's opinion? How do you know?

Fourth Reader Level Silent Reading

Motivation: There are many reasons why newspapers are widely read. This selection describes them.

Newspapers are part of our way of life. They serve many good purposes. Ads tell about sales and new products. News items have brought an end to corrupt public servants. Letters to the paper are important. They let readers give their views on issues that concern them. Comics and features can amuse and inform us. Papers help preserve free speech.

Newspapers are a big business. They are run for profit. Most of their income comes from ads. Many papers are owned by big chains. About a fifth of the people in the country work for papers. Readers spent over two billion dollars on papers in 1970. Nearly 80 percent of all adults read papers. Many readers are between 14 and 25 years of age.

1. Whom have newspapers exposed? (corrupt public servants)
2. How can people express their views? (letters to the paper)
3. What do newspapers help preserve? (free speech)
4. How much money did readers spend on papers in 1970? (2 billion dollars)
*5. What does the word "issue" mean in this selection?
*6. Why can we conclude that newspapers are big business?
*7. According to the facts given in this article, why do you think it would pay to advertise?
*8. Why is freedom of the press important to our government?

*Accept reasonable inference.

*9. Were there any facts that you know about newspapers that were not included by the writer?
*10. What might happen if suddenly the newspapers were closed down?

Fifth Reader Level Silent Reading

Motivation: The first gold diggers were a tough lot. Read to find out how they did their work.

The early gold diggers worked together in pairs. They stood in their bare feet in cold river water, with large hats to keep the sun away. They dug huge mounds of dirt from spots where they thought gold was buried. One man held a sieve made from loose willow branches over a flat frying pan. The other man carefully shoveled dirt into the sieve. When the pan was full, they carried it to the river and put it in the water. They used sticks to stir it until most of the earth washed away over the top. The dirt that was left was put in the sun to dry. When it had dried and the dirt had blown away, the gold lay shining in the bottom of the pan. Sometimes it was in pieces the size of nuts, but more often it was in the form of dust and sand.

1. How did gold diggers make a sieve?
*2. Why were two men needed to mine gold?
3. What did the men use to stir the sieve with? (sticks)
4. In what form did gold most often appear? (dust and sand)
*5. In your own words, describe the process of mining gold.
*6. What sort of persons do you think gold diggers were? Why?
*7. Why could digging for gold sometimes be discouraging?
*8. What would be a good name for this article?
*9. Gold diggers often were concerned about "claim jumpers." How would this term fit this selection?
*10. Can you think of any better ways for mining gold? (Discuss)

Sixth Reader Level Silent Reading

Motivation: Read this article to find out why camels are important for survival in the desert.

There are many reasons why the single-humped camel is the chief means of transportation in the desert. It is magnificently suited for its survival and the survival of its owner. Its widespread hoofs can shift the weight of a load. Thick heavy pads help protect the roofs from the broiling heat of loose, bare rocks. Camels can

*Accept reasonable inference.

stand severe heat and cold. Some camels have been known to go without drinking water for thirty-four days. They provide their owners with fresh milk, and when starvation is at hand, with meat as well. From their hair comes raw material for clothes; from their skin, the stuff that tents are made from. Their sinews are used for ropes and thongs. In short, these animals can supply most of the desert dweller's life needs.

1. What kind of camel is described in the selection? (single humped)
2. What protects the camel from broiling rocks? (heavy hoof pads)
3. How long have camels been known to go without drinking water? (34 days)
4. What two things can camels withstand? (severe heat and cold)
*5. What do you think sinews probably are? (tendons, something like string)
*6. What two main ideas about camels are discussed? (its survival and the survival of its owner)
*7. Compare the advantages and disadvantages of using horses and camels in the desert.
*8. What would be a good title for the article?
*9. How can camels help their owners survive? (provide milk, meat, etc.)
*10. Has anything that you already know about camels been omitted in the article?

*Accept reasonable inference.

WORD RECOGNITION TEST IN ISOLATION

Specific instructions for using the Word Recognition Test in Isolation are discussed in Chapter III. The test provides a benchmark for using the Informal Reading Inventory. After the pupil misses six words in the untimed column, discontinue the test and begin with the graded paragraph one grade level below where the errors were observed.

The concept of a vocabulary list for a specific reading grade level is an interesting but somewhat invalid assumption. Studies involving word lists with day school students revealed that pupils at one grade level often knew as many words at the next level as students reading at that stage. Words are learned by building many varied associations with meanings, pronunciations, usage and the like. This test provides a place to begin with the informal reading inventory.

Advanced Word Recognition Test

Initial Reading

Stimulus	*Flash*	*Untimed*
1. who	_____	_____
2. no	_____	_____
3. better	_____	_____
4. eat	_____	_____
5. at	_____	_____
6. my	_____	_____
7. away	_____	_____
8. can	_____	_____
9. like	_____	_____
10. are	_____	_____
11. did	_____	_____
12. no	_____	_____
13. about	_____	_____
14. they	_____	_____
15. at	_____	_____
16. on	_____	_____
17. fish	_____	_____
18. some	_____	_____
19. got	_____	_____
20. do	_____	_____
Scores	_____	_____

Level I

Stimulus	*Flash*	*Untimed*
1. work	_____	_____
2. street	_____	_____
3. water	_____	_____
4. way	_____	_____
5. many	_____	_____
6. race	_____	_____
7. know	_____	_____
8. over	_____	_____
9. riding	_____	_____
10. next	_____	_____
11. please	_____	_____
12. off	_____	_____
13. night	_____	_____
14. be	_____	_____
15. time	_____	_____
16. old	_____	_____
17. thing	_____	_____
18. when	_____	_____
19. their	_____	_____
20. would	_____	_____
Scores	_____	_____

Level II

Stimulus	*Flash*	*Untimed*
1. wash	_____	_____
2. noise	_____	_____
3. bell	_____	_____
4. string	_____	_____
5. through	_____	_____
6. side	_____	_____
7. knew	_____	_____
8. cook	_____	_____
9. air	_____	_____
10. tire	_____	_____
11. across	_____	_____
12. floor	_____	_____
13. wash	_____	_____
14. while	_____	_____
15. chair	_____	_____
16. tie	_____	_____
17. anything	_____	_____
18. hard	_____	_____

19.	beauty	_____	_____
20.	bowl	_____	_____
	Scores	_____	_____

Level III

Stimulus		*Flash*	*Untimed*
1.	heard	_____	_____
2.	beautiful	_____	_____
3.	clothe	_____	_____
4.	thirsty	_____	_____
5.	really	_____	_____
6.	hundred	_____	_____
7.	careful	_____	_____
8.	whether	_____	_____
9.	different	_____	_____
10.	wooden	_____	_____
11.	lovely	_____	_____
12.	whole	_____	_____
13.	lead	_____	_____
14.	above	_____	_____
15.	wore	_____	_____
16.	journey	_____	_____
17.	fruit	_____	_____
18.	empty	_____	_____
19.	stove	_____	_____
20.	invite	_____	_____
	Scores	_____	_____

Level IV

Stimulus		*Flash*	*Untimed*
1.	automobile	_____	_____
2.	bacon	_____	_____
3.	breathe	_____	_____
4.	chief	_____	_____
5.	crew	_____	_____
6.	distress	_____	_____
7.	exact	_____	_____
8.	family	_____	_____
9.	gown	_____	_____
10.	hobo	_____	_____
11.	introduce	_____	_____
12.	lame	_____	_____
13.	magazine	_____	_____
14.	mount	_____	_____

15. pedal _____ _____
16. racket _____ _____
17. ruin _____ _____
18. shanty _____ _____
19. teeming _____ _____
20. unequal _____ _____
Scores _____ _____

Level V

Stimulus	*Flash*	*Untimed*
1. ambulance	_____	_____
2. barrel	_____	_____
3. border	_____	_____
4. committee	_____	_____
5. cylinder	_____	_____
6. doily	_____	_____
7. exclaim	_____	_____
8. freeze	_____	_____
9. gurgle	_____	_____
10. injure	_____	_____
11. lime	_____	_____
12. molasses	_____	_____
13. oath	_____	_____
14. physical	_____	_____
15. provoke	_____	_____
16. roost	_____	_____
17. snuggle	_____	_____
18. terror	_____	_____
19. twine	_____	_____
20. welcome	_____	_____
Scores	_____	_____

Level VI

Stimulus	*Flash*	*Untimed*
1. appreciate	_____	_____
2. browse	_____	_____
3. casual	_____	_____
4. cluttered	_____	_____
5. divert	_____	_____
6. extensive	_____	_____
7. girder	_____	_____
8. herring	_____	_____
9. irate	_____	_____
10. jumbled	_____	_____

11.	memorial	_____	_____
12.	novel	_____	_____
13.	partial	_____	_____
14.	portable	_____	_____
15.	recipe	_____	_____
16.	structure	_____	_____
17.	spoil	_____	_____
18.	tango	_____	_____
19.	unwise	_____	_____
20.	wallop	_____	_____
	Scores	_____	_____

1.15

INFORMAL TEST OF LETTER KNOWLEDGE

A. *Identifying letters named:* Instruct the student to find the letter that you name in each row. Be clear when enunciating letters that have similar sounds. If he pauses more than several seconds, move on to the next row. Directions: "Point to the letter in each box that I say."
1. f, 2. x, 3. i, 4. s, 5. p, 6. c, 7. l, 8. r, 9. t, 10. v, 11. j, 12. q, 13. d, 14. w, 15. y, 16. u, 17. z, 18. k, 19. e, 20. g, 21. h, 22. m, 23. a, 24. n, 25. b, 26. o.

B. *Supplying letter names:* Skill in providing the names of letters is not necessarily assured by a good score on the preceding test. Some students can identify letters when names are supplied, but are uncertain of their names when they are asked to give them. The same test is used to assess this skill. Directions: "Tell me the name of the letter that I point to."
1. b, 2. n, 3. i, 4. w, 5. p, 6. c, 7. l, 8. r, 9. g, 10. m, 11. o, 12. s, 13. z, 14. k, 15. y, 16. j, 17. a, 18. x, 19. e, 20. f, 21. h, 22. q, 23. u, 24. t, 25. v, 26. d.

C. *Scoring:* The results of this test should be incorporated in the initial reading program. What specific letters are causing difficulty? Assess configuration problems (b, g, d). Most students who manifest a high degree of readiness for reading will be able to identify 23 letters and supply the same number.
Research studies on frequencies of intial sounds and letters in words in the speaking vocabularies reveal that the following letters, listed in order of frequency, occur most often: s, c, b, p, t, f, h, a, g, r, l, and m. For example, Murphy in a study published in the *Journal of Education* (57) observed that the letter "s" appeared in the initial position of 770 high frequency words. Context and intial letters provide strong decoding clues for students at the initial stage of reading. The instructional sequence begins with matching, followed by naming and letter sound associations.

Informal Test of Letter Knowledge

Name _____ Scores: Shown ____ Named ____

1.	b	z	f	v
2.	n	x	u	p
3.	i	t	l	n
4.	w	r	s	t
5.	b	s	p	u
6.	c	x	e	h
7.	t	v	l	b
8.	r	w	n	z
9.	l	t	u	g
10.	m	v	n	x
11.	o	j	i	n
12.	q	c	s	b
13.	b	z	d	i

14.	w	k	t	v
15.	f	y	n	g
16.	r	v	u	j
17.	z	a	f	r
18.	k	e	x	t
19.	c	g	x	e
20.	g	b	i	f
21.	h	o	p	t
22.	m	v	q	n
23.	z	s	u	a
24.	w	t	o	n
25.	b	v	k	m
26.	g	r	o	d

AUDITORY-VISUAL INTEGRATION TEST

Directions: This is an informal measure of auditory-visual integration ability. The student is instructed to listen to the initial or final sound in a given word and look at the initial or final elements in three words and select the one which has the same sound as the stimulus word. Words should not be read with any special emphasis. It is advisable to use a marker. If three or more errors are noted, inadequate auditory-visual integration should be suspected.

Test analysis should include an examination of specific difficulties. The phonics program should be initiated sequentially beginning with consonants in the initial and final positions, followed by blends, digraphs and vowels.

Section A—Initial Consonants

Example: "Notice the three words in line #1. Look at the first letter in each word. Now, listen to the sound in the beginning of the word summer. Which word begins with the letter whose sound is heard in the beginning of summer?" Continue the test with the following words:

2. face, 3. money, 4. ladder, 5. curfew, 6. governor, 7. health, 8. demand, 9. pulley, 10. button

Section B—Initial Blends and Digraphs

Example: "Notice the three words in line #1. This time look at the first two letters in each word. Which word begins with the letters whose sound is heard in the beginning of drag?"

Continue with the following list: 2. class, 3. prairie, 4. brake, 5. flower, 6. grill, 7. state, 8. skate, 9. flame, 10. crane, 11. when, 12. thaw, 13. charm, 14. sheet.

Section C—Final Sounds

Example: "Notice the three words in line #1. This time look at the last letter in each word. Now, listen to the sound at the end of the word initial. Which word ends with the letter whose sound is heard at the end of the word initial?" Continue with the words through line #6. The remainder of the test utilizes blends and digraphs in the final position. "In line #7 look at the last two letters in each word. Which word ends with the letters whose sound is heard at the end of the word wish?" Continue the test with the following words:

2. portrait, 3. chair, 4. tread, 5. kitchen, 6. thermos, 7. wish, 8. munch, 9. wrath, 10. just.

Student Response Sheet

Section A

1.	music	sail	picnic
2.	disaster	coarse	fat
3.	mile	vest	tact
4.	liquor	segregate	house
5.	tire	marbles	cadillac
6.	garden	letter	dime
7.	fight	cucumber	harvest
8.	new	design	height
9.	near	yellow	parachute
10.	basket	require	lifeless

Section B

1.	break	freckle	drink
2.	price	clip	plug
3.	preach	brick	tree
4.	blame	grill	breakfast
5.	fresh	flash	trash
6.	tractor	grenade	brother
7.	star	spill	grudge
8.	friend	drainage	skit
9.	plague	flow	frame
10.	brake	crate	dress
11.	then	whether	shake
12.	bing	thin	whim
13.	shop	chance	fish
14.	character	shell	they

Section C

1.	blend	rational	blip
2.	find	vest	scrape
3.	market	early	fair
4.	special	paid	lesson
5.	unit	has	been
6.	children	word	circus
7.	fish	ghost	laugh
8.	past	church	bring
9.	length	search	clasp
10.	risk	first	truth

Constructed by Michael P. O'Donnell, director of the Reading Clinic, University of Maine at Portland-Gorham and Laurel Cyr, research associate.

INFORMAL VISUAL DISCRIMINATION TEST

Directions: Instruct the student to look at the words in each block on each line and have him indicate in which frame the two words are exactly alike. Practice with the first two lines. Pupils should be allowed to use a line marker. If more than (3) errors are noted, difficulty with word form perception should be suspected. If extremely poor performance is observed, try visual discrimination of words of strong dissimilar configuration (book-mother).

• and	able	and	air	and	and
• book	bake	book	book	book	bear
1. some	some	some	said	some	soon
2. rake	red	rake	rake	rake	ran
3. here	hair	here	held	here	here
4. glad	green	glad	glad	glad	gone
5. hold	hold	hold	help	hold	home
6. walk	wake	walk	walk	walk	want
7. pie	pin	pie	paint	pie	pie
8. take	time	take	took	take	take
9. man	main	man	man	man	make
10. car	came	car	card	car	car
11. look	look	look	lock	look	like
12. after	apple	after	after	after	able
13. father	father	father	first	father	fast
14. bake	bake	bake	back	bake	bank
15. dark	dart	dark	dawn	dark	dark
16. sat	sat	sat	sap	sat	send
17. from	frame	from	fast	from	from
18. this	there	this	this	this	that
19. sled	sled	sled	slate	sled	slide
20. shop	shell	shop	shop	shop	sheep

Research dealing with visual perception and initial reading suggests a strong relationship between ability to discriminate between words and the acquisition of a sight vocabulary. Training should stress differences between words. Beginning readers should be encouraged to verbalize differences among initial letters, final letters and medial elements. The practice of having pupils visually discriminate among geometric forms ("find the shape like this □ ") has absolutely no correlation with reading. The basic goal of phonics and structural analysis is to help the student make an accurate visual inspection of words unknown only in their printed form (br-ake).

Appendix C

REFERENCE LIST OF INSTRUCTIONAL MATERIALS

The following list of commercially prepared materials may be helpful to you in developing your instructional program:

1. *Adult Basic Education*, Steck-Vaughn Company, P. O. Box 2068, Austin, Texas 78767.
2. *Adult Readers*, Reader's Digest, Pleasantville, New York 10570.
3. *Be A Better Reader Series*, Prentice Hall, 70 5th Avenue, New York, New York 17653.
4. *Building Reading Power*, Charles E. Merrill Co., 1300 Abin Creek Drive, Columbus, Ohio 43216.
5. *Classroom Library*, Falcon Book Series, Noble and Noble Publishing, Inc., 750 Third Avenue, New York, New York 10017.
6. *Consumer Education Series*, Follett Publishing Company, 1010 West Washington Boulevard, Chicago, Illinois 60607.
7. *Job Ahead—Occupational Reading Series*, Science Research Associates, 259 East Erie Street, Chicago, Illinois 60611.
8. *News For You*, New Reader's Press, Syracuse, New York 13210.
9. *Opportunity for Skillful Reading Series*, Wadworth Publishing Company, Belmont, California 94002.
10. *Picto-Cabulary Series*, Barnell Loft Ltd., 958 Church Street, Baldwin Long Island, New York 11510.
11. *Problems of American Society Series*, Washington Square Press, 1 West 39th Street, New York, New York 10018.
12. *Reading Attainment System*, Ann Arbor Publishers, 611 Church Street, Ann Arbor, Michigan 48104.
13. *Reading Booster Series*, McGraw-Hill Book Company, 330 West 42nd Street, New York, New York 10036.
14. *Reading Improvement for Men and Women in Industry*, Educator's Publishing Services, Cambridge, Massachusetts 02138.
15. *Scholastic Classroom Libraries*, 50 West 44th Street, New York, New York 10036.
16. *Skilled Tests and Fact Finding Series*, Special Services Supply Company, Box 705, Huntington, New York 11743.
17. *Social Living Skills*, University of Maine at Portland-Gorham, Gorham, Maine 04038.
18. *Specific Skills Series*, Barnell Loft Ltd., 958 Church Street, Baldwin, Long Island, New York 11510.
19. *Spectrum Reading Series* MacMillan Company, 866 3rd Avenue, New York, New York 10023.
20. *Study Reading Exercises*, Teacher's College Press, Columbia University, New York, New York 10027.
21. *Study Skills Library*, Educational Development Laboratories, Huntington, New York 11743.

22. *Tactics in Reading*, Scott, Foresman Company, 433 East Erie Street, Chicago, Illinois 60611.
23. *Turner-Livingston Reading Communications Series*, Follett Publishing Company, 1010 West Washington Boulevard, Chicago, Illinois 60607.
24. *Webster Classroom Reading Clinic*, McGraw-Hill Book Company, 330 West 42nd Street, New York, New York 10036.

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